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NEWS 7 SEP 09 ACD predicted properties enhanced in REGISTRY/ZREGISTRY  
NEWS 8 OCT 03 MATHDI removed from STN  
NEWS 9 OCT 04 CA/Caplus-Canadian Intellectual Property Office (CIPO) added  
to core patent offices  
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NEWS 11 OCT 13 New CAS Information Use Policies Effective October 17, 2005  
NEWS 12 OCT 17 STN(R) AnaVist(TM), Version 1.01, allows the export/download  
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NEWS 13 OCT 27 Free KWIC format extended in full-text databases  
NEWS 14 OCT 27 DIOGENES content streamlined  
NEWS 15 OCT 27 EPFULL enhanced with additional content  
  
NEWS EXPRESS JUNE 13 CURRENT WINDOWS VERSION IS V8.0, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 13 JUNE 2005  
  
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FILE 'HOME' ENTERED AT 11:18:04 ON 14 NOV 2005

=> file reg

COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
0.21	0.21

FILE 'REGISTRY' ENTERED AT 11:18:10 ON 14 NOV 2005  
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STRUCTURE FILE UPDATES: 13 NOV 2005 HIGHEST RN 867336-65-0  
DICTIONARY FILE UPDATES: 13 NOV 2005 HIGHEST RN 867336-65-0

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TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

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\*\*\*\*\*  
\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Structure search iteration limits have been increased. See HELP SLIMITS  
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experimental property data in the original document. For information  
on property searching in REGISTRY, refer to:

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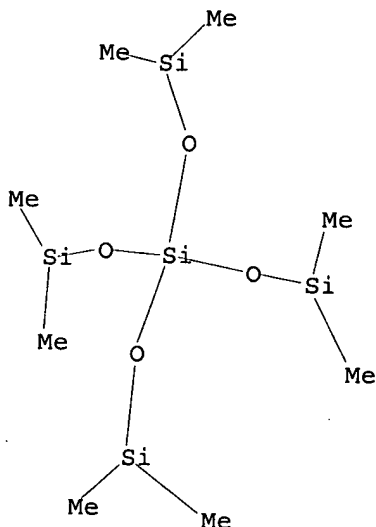
Uploading C:\Program Files\Stnexp\Queries\10519636.str

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 11:18:46 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 1535 TO ITERATE

100.0% PROCESSED 1535 ITERATIONS

9 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 28350 TO 33050

PROJECTED ANSWERS: 9 TO 360

L2 9 SEA SSS SAM L1

=> s l1 sss full

FULL SEARCH INITIATED 11:18:58 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 30351 TO ITERATE

100.0% PROCESSED 30351 ITERATIONS

244 ANSWERS

SEARCH TIME: 00.00.01

L3 244 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

161.76

161.97

FILE 'CAPLUS' ENTERED AT 11:19:08 ON 14 NOV 2005

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FILE COVERS 1907 - 14 Nov 2005 VOL 143 ISS 21

FILE LAST UPDATED: 13 Nov 2005 (20051113/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

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=> s l3

L4 490 L3

=> s l4 and carboxylic acid

232236 CARBOXYLIC

46 CARBOXYLICS

232254 CARBOXYLIC

(CARBOXYLIC OR CARBOXYLICS)

4060796 ACID  
 1499455 ACIDS  
 4544875 ACID  
 (ACID OR ACIDS)  
 213880 CARBOXYLIC ACID  
 (CARBOXYLIC(W)ACID)  
 L5 4 L4 AND CARBOXYLIC ACID

=> s l4 and acid catalyst  
 4060796 ACID  
 1499455 ACIDS  
 4544875 ACID  
 (ACID OR ACIDS)  
 705187 CATALYST  
 708616 CATALYSTS  
 904411 CATALYST  
 (CATALYST OR CATALYSTS)  
 35699 ACID CATALYST  
 (ACID(W)CATALYST)  
 L6 13 L4 AND ACID CATALYST

=> s l4 and anhydride  
 199768 ANHYDRIDE  
 31779 ANHYDRIDES  
 209984 ANHYDRIDE  
 (ANHYDRIDE OR ANHYDRIDES)  
 L7 7 L4 AND ANHYDRIDE

=> s l5 or l6 or l7  
 L8 21 L5 OR L6 OR L7

=> s l5 and l6 and l7  
 L9 1 L5 AND L6 AND L7

=> d l9 ibib ab hitstr

L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2003:610462 CAPLUS  
 DOCUMENT NUMBER: 139:149753  
 TITLE: Processes for the preparation of silicone compounds  
 INVENTOR(S): Iimura, Tomohiro; Onodera, Satoshi; Okawa, Tadashi;  
 Yoshitake, Makoto  
 PATENT ASSIGNEE(S): Dow Corning Toray Silicone Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 22 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003064436	A1	20030807	WO 2003-JP746	20030127
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2003226692	A2	20030812	JP 2002-24434	20020131

EP 1472264 A1 20041103 EP 2003-701894 20030127  
 EP 1472264 B1 20050615  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK  
 AT 297937 E 20050715 AT 2003-701894 20030127  
 PRIORITY APPLN. INFO.: JP 2002-24434 A 20020131  
 WO 2003-JP746 W 20030127

OTHER SOURCE(S): CASREACT 139:149753

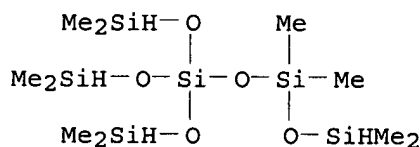
AB A process for preparing a silicone compound, the process comprising reacting (A) a silicon compound having silicon-bonded alkoxy groups or silicon-bonded aryloxy groups and (B) a disiloxane in the presence of (C) a carboxylic acid, (D) an acid catalyst, and (E) a carboxylic anhydride, and a process for preparing a silicone compound, the process comprising reacting (F) a silicon compound having silicon-bonded acyloxy groups and (B) a disiloxane compound in the presence of (D) an acid catalyst, (E) a carboxylic anhydride, and (G) an alc. Thus, trifluoromethanesulfonic acid catalyzed reaction of 1,1,3,3-tetramethyldisiloxane with AcOH in presence of tetramethoxysilane at 45° followed by treatment with Ac2O gave (HSiMe2O)4Si containing (HSiMe2O)3Si(OSiMe2OSiHMe2), (HSiMe2O)3SiOSi(OSiMe2H)3, and (HSiMe2O)3SiOMe as byproducts.

IT 572911-68-3P 572911-70-7P

RL: BYP (Byproduct); PREP (Preparation)  
 (processes for preparation of silicone compds. via substitution of siloxy groups for silicon-bonded alkoxy, aryloxy, or acyloxy groups in silicon compds.)

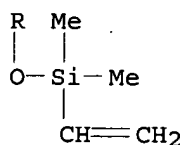
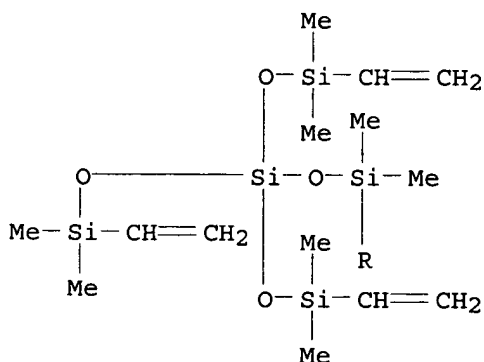
RN 572911-68-3 CAPLUS

CN Tetrasiloxane, 3,3-bis[(dimethylsilyl)oxy]-1,1,5,5,7,7-hexamethyl- (9CI)  
 (CA INDEX NAME)

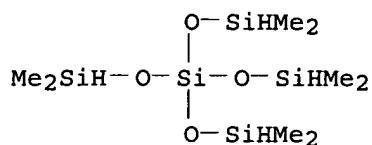


RN 572911-70-7 CAPLUS

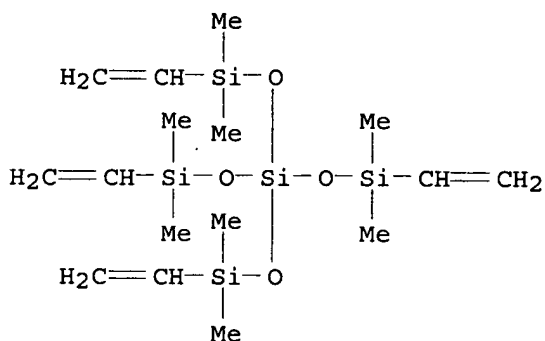
CN Tetrasiloxane, 1,7-diethenyl-3,3-bis[(ethenyldimethylsilyl)oxy]-1,1,5,5,7,7-hexamethyl- (9CI) (CA INDEX NAME)



IT 17082-47-2P 60111-54-8P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (processes for preparation of silicone compds. via substitution of siloxy  
 groups for silicon-bonded alkoxy, aryloxy, or acyloxy groups in silicon  
 compds.)  
 RN 17082-47-2 CAPLUS  
 CN Trisiloxane, 3,3-bis[(dimethylsilyl)oxy]-1,1,5,5-tetramethyl- (9CI) (CA  
 INDEX NAME)



RN 60111-54-8 CAPLUS  
 CN Trisiloxane, 1,5-diethenyl-3,3-bis[(ethenyldimethylsilyl)oxy]-1,1,5,5-  
 tetramethyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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(FILE 'HOME' ENTERED AT 11:18:04 ON 14 NOV 2005)

FILE 'REGISTRY' ENTERED AT 11:18:10 ON 14 NOV 2005

L1 STRUCTURE UPLOADED  
 L2 9 S L1  
 L3 244 S L1 SSS FULL

FILE 'CAPLUS' ENTERED AT 11:19:08 ON 14 NOV 2005

L4 490 S L3  
 L5 4 S L4 AND CARBOXYLIC ACID  
 L6 13 S L4 AND ACID CATALYST  
 L7 7 S L4 AND ANHYDRIDE  
 L8 21 S L5 OR L6 OR L7  
 L9 1 S L5 AND L6 AND L7

=> s l8 not l9

L10 20 L8 NOT L9

=> d l10 ibib ab hitstr 1-20

L10 ANSWER 1 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2005:497294 CAPLUS

DOCUMENT NUMBER: 143:27411  
 TITLE: Silicone-based thermosetting resin composition and photo-semiconductor encapsulant  
 INVENTOR(S): Yoshikawa, Yuji  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan  
 SOURCE: U.S. Pat. Appl. Publ., 7 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005123776	A1	20050609	US 2004-6711	20041208
JP 2005171021	A2	20050630	JP 2003-410576	20031209
PRIORITY APPLN. INFO.:			JP 2003-410576	A 20031209

AB A thermosetting resin composition comprising (A) a silicone compound containing at least two epoxy groups per mol. and having a mol. weight of 500-2,100, (B) an acid anhydride, and (C) an optional catalyst cures into a low stressed product having improved adhesion, heat resistance and moisture resistance and free of cure shrinkage.

IT 852938-10-4P  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (silicone-based thermosetting resin composition and photo-semiconductor encapsulant)

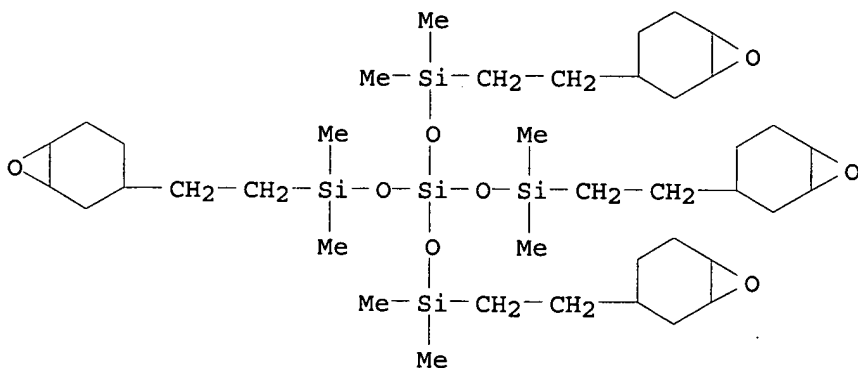
RN 852938-10-4 CAPLUS

CN 1,2-Cyclohexanedicarboxylic acid, polymer with 3,3-bis[[dimethyl[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]silyl]oxy]-1,1,5,5-tetramethyl-1,5-bis[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]trisiloxane (9CI) (CA INDEX NAME)

CM 1

CRN 121239-70-1

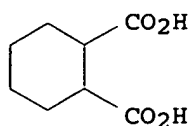
CMF C40 H76 O8 Si5



CM 2

CRN 1687-30-5

CMF C8 H12 O4



L10 ANSWER 2 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2005:120090 CAPLUS  
 DOCUMENT NUMBER: 142:176943  
 TITLE: Preparation of high-purity  
 tetrakis(trimethylsiloxy)silane  
 INVENTOR(S): Sakuta, Koji  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005035976	A2	20050210	JP 2004-144420	20040514
PRIORITY APPLN. INFO.:			JP 2003-177429	A 20030623

OTHER SOURCE(S): MARPAT 142:176943

AB Si(OSiMe<sub>3</sub>)<sub>4</sub> is prepared by hydrolysis-condensation of 1 mol Si(OR)<sub>4</sub> (R = C<sub>2</sub>-10 monovalent hydrocarbyl) with 2.0-10.0 mol O(SiMe<sub>3</sub>)<sub>2</sub> in the presence of 0.01-0.5 mol acid catalysts and 2.5-10.0 mol water, which is added at 0° to <30°. The water-treatment time is 30 min to 5 h. After the addition of the water, the reaction mixture is treated at 30-100° for 30 to 5 h. Thus, Si(OMe)<sub>4</sub> was added to a mixture of O(SiMe<sub>3</sub>)<sub>2</sub>, MeOH, and H<sub>2</sub>SO<sub>4</sub> at 10° over 45 h, and the reaction mixture was stirred at 10° for 1 h. Water was then added to the reaction mixture at 10° over 1 h, the reaction mixture stirred at 5-25° for 1 h, and heated at 50° for 2 h to give 86.5% Si(OSiMe<sub>3</sub>)<sub>4</sub> with ≥99.5% purity.

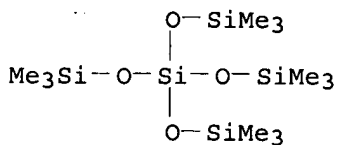
IT 3555-47-3P, Tetrakis(trimethylsiloxy)silane

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(preparation of Si(OSiMe<sub>3</sub>)<sub>4</sub> from alkoxysilanes and O(SiMe<sub>3</sub>)<sub>2</sub> in presence of acid catalysts, water, and optionally primary alcs.)

RN 3555-47-3 CAPLUS

CN Trisiloxane, 1,1,1,5,5,5-hexamethyl-3,3-bis[(trimethylsilyl)oxy]- (9CI)  
 (CA INDEX NAME)



L10 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:265232 CAPLUS  
 DOCUMENT NUMBER: 141:89475  
 TITLE: Synthesis of terminal Si-H irregular tetra-branched  
 star polysiloxanes. Pt-catalyzed hydrosilylation with  
 unsaturated epoxides. Polysiloxane films by photo-acid  
 catalyzed crosslinking  
 AUTHOR(S): Cai, Guoping; Weber, William P.



CORPORATE SOURCE: K.B. and D.P. Loker Hydrocarbon Research Institute,  
Department of Chemistry, University of Southern  
California, Los Angeles, CA, 90089-1661, USA

SOURCE: Polymer (2004), 45(9), 2941-2948  
CODEN: POLMAG; ISSN: 0032-3861

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Acid catalyzed insertion of octamethylcyclotetrasiloxane (D4) into the Si-O bonds of tetrakis(dimethylsiloxy)silane leads to irregular tetra-branched star polymers-tetrakis( $\omega$ -dimethylsiloxy)poly(dimethylsiloxy)silane (I). The terminal Si-H bonds of I have been modified by Pt-catalyzed hydrosilylation with 4-vinylcyclohexane-1,2-epoxide to yield a tetra-branched star polydimethylsiloxanes (PDMS) with terminal 2'-ethyl-4-cyclohexanyl-1,2-epoxide groups (II). Solns. of this material and a catalytic amts. of diaryl iodonium hexafluoroantimonate, a photo-acid catalyst, were cast onto glass slides and subsequently irradiated. This results in formation of crosslinked PDMS films (V). The soluble tetra-branched PDMS stars have been characterized by  $^1\text{H}$ ,  $^{13}\text{C}$ , and  $^{29}\text{Si}$  NMR as well as by IR spectroscopy. Their mol. weight distributions have been determined by GPC, multi-angle laser light scattering (MALLS), and end groups anal. Their viscosities were measured with a Brookfield viscometer. The thermal stability of the polymers and the crosslinked films were determined by TGA. The glass transition temps. ( $T_g$ )s of the polymers were determined by DSC. The loss ( $G''$ ) and storage ( $G'$ ) shear moduli of the films were determined by DMTA. Surface properties of the films were determined by measurement of static contact angles. Similar star polymers, tetrakis(dimethylsiloxy)poly[3',3',3'-trifluoropropylmethylsiloxy]silanes (III) were prepared by acid catalyzed equilibration of tetrakis(dimethylsiloxy)silane with 1,3,5-trimethyl-1,3,5-tris(3',3',3'-trifluoropropyl)cyclotrisiloxanes (D3F). These were, likewise, modified by Pt-catalyzed hydrosilylation with 4-vinylcyclohexane-1,2-epoxide. Films (VI) of this material were similarly prepared by photo-acid catalyzed crosslinking.

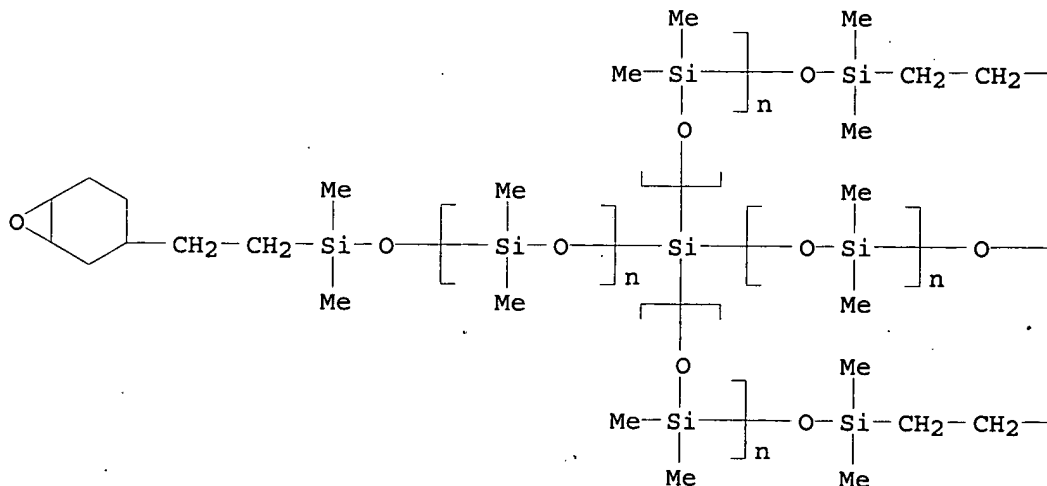
IT 704916-01-8P 713528-16-6P

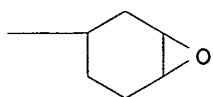
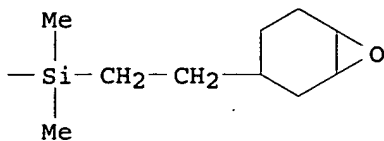
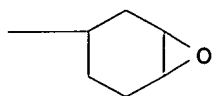
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(synthesis, crosslinking, and mech., thermal, and rheol. properties of terminal Si-H irregular tetra-branched star polysiloxanes)

RN 704916-01-8 CAPLUS

CN Poly[oxy(dimethylsilylene)],  $\alpha, \alpha', \alpha'', \alpha'''$ -  
silanetetrayltetrakis( $\omega$ -[[dimethyl[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]silyl]oxy]- (9CI) (CA INDEX NAME)

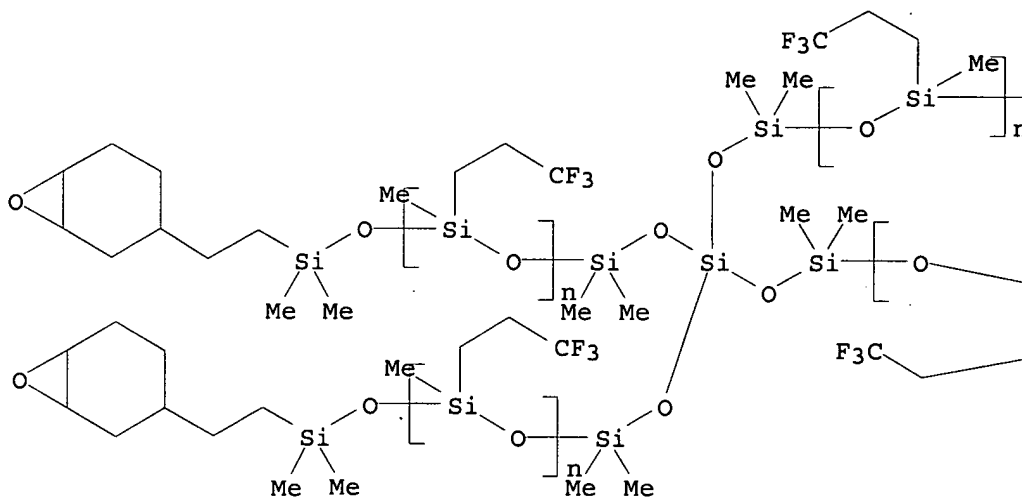
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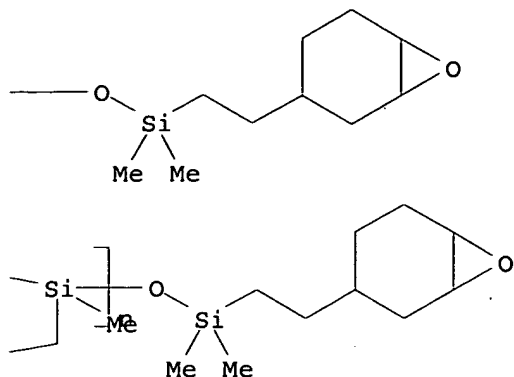




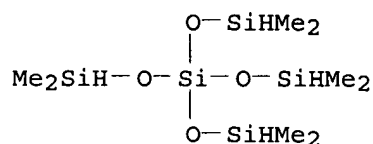
RN 713528-16-6 CAPLUS

CN Poly[oxy[methyl(3,3,3-trifluoropropyl)silylene]],  
 $\alpha, \alpha', \alpha'', \alpha'''$ -[silanetetrayltetrakis[oxy(dimethylsilylene)]]tetrakis[ $\omega$ -[[dimethyl[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]silyl]oxy]- (9CI) (CA INDEX NAME)

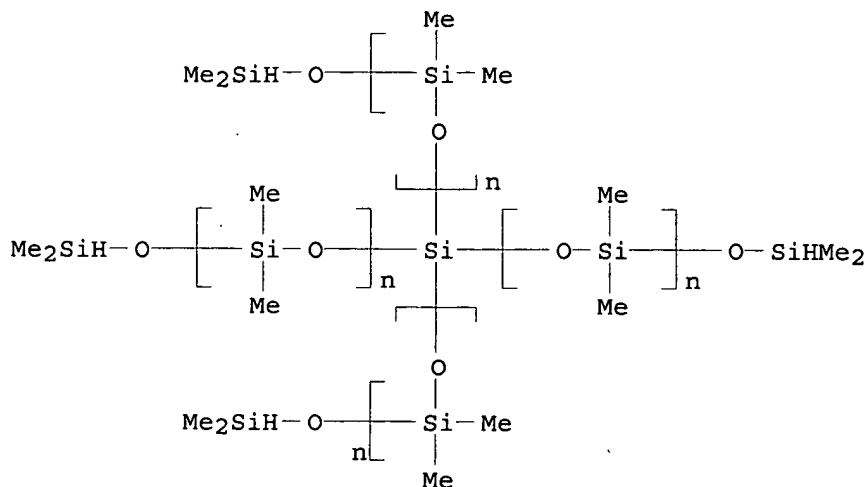




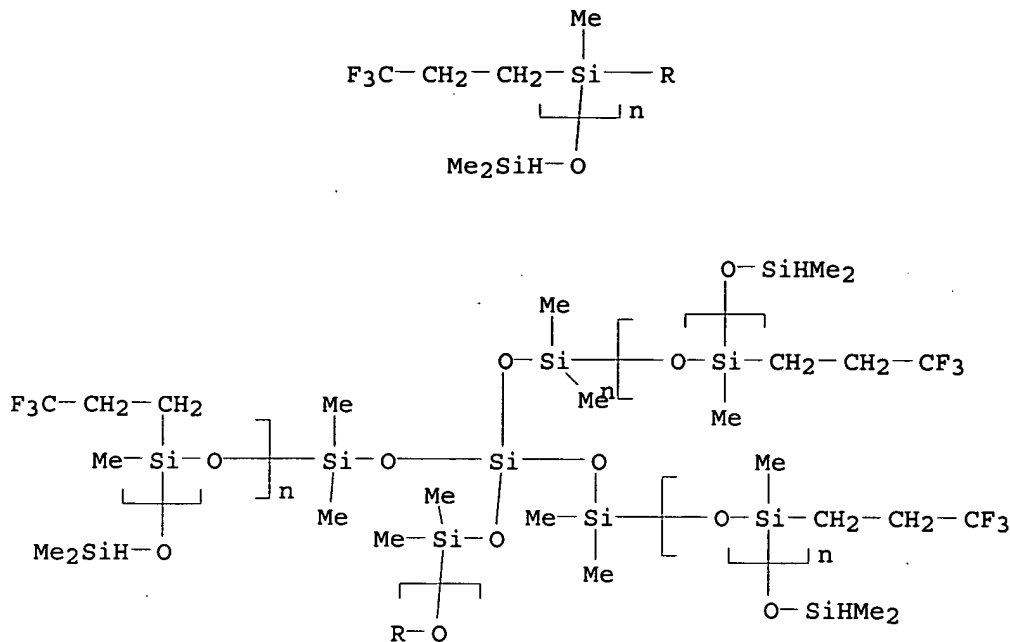
IT 17082-47-2, Tetrakis(dimethylsiloxy)silane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (synthesis, crosslinking, and mech., thermal, and rheol. properties of  
 terminal Si-H irregular tetra-branched star polysiloxanes)  
 RN 17082-47-2 CAPLUS  
 CN Trisiloxane, 3,3-bis[(dimethylsilyl)oxy]-1,1,5,5-tetramethyl- (9CI) (CA  
 INDEX NAME)



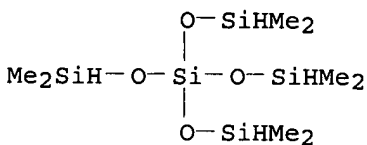
IT 713528-14-4P 713528-15-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (synthesis, crosslinking, and mech., thermal, and rheol. properties of  
 terminal Si-H irregular tetra-branched star polysiloxanes)  
 RN 713528-14-4 CAPLUS  
 CN Poly[oxy(dimethylsilylene)],  $\alpha, \alpha', \alpha'', \alpha'''$ -  
 silanetetrayltetrakis[ $\omega$ -[(dimethylsilyl)oxy]- (9CI) (CA INDEX NAME)



RN 713528-15-5 CAPLUS  
 CN Poly[oxy[methyl(3,3,3-trifluoropropyl)silylene]],

$$\alpha, \alpha', \alpha'', \alpha''' - [\text{silanetetrayltetrakis}[\text{oxy}(\text{dimethylsilylene})]] \text{tetrakis}[\omega - [(\text{dimethylsilyl})\text{oxy}] - (9\text{CI})] \quad (\text{CA INDEX NAME})$$


IT	17082-47-2DP, Tetrakis(dimethylsiloxy)silane, reaction products with polydimethylsiloxane and, optionally 4-Vinylcyclohexane-1,2-epoxide RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (uncrosslinked and UV-crosslinked; synthesis, crosslinking, and mech., thermal, and rheol. properties of terminal Si-H irregular tetra-branched star polysiloxanes)
RN	17082-47-2 CAPLUS
CN	Trisiloxane, 3,3-bis[(dimethylsilyl)oxy]-1,1,5,5-tetramethyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2004:252560 CAPLUS  
DOCUMENT NUMBER: 140:271423  
TITLE: Organopolysiloxane-modified polysaccharide and process  
for producing the same  
INVENTOR(S): Okawa, Tadashi; Hayashi, Masayuki  
PATENT ASSIGNEE(S): Dow Corning Toray Silicone Co., Ltd., Japan  
SOURCE: PCT Int. Appl., 47 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004024799	A1	20040325	WO 2003-JP11458	20030908
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2004156004	A2	20040603	JP 2003-79260	20030324
EP 1550688	A1	20050706	EP 2003-795316	20030908
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
US 2005250904	A1	20051110	US 2005-526729	20050304
PRIORITY APPLN. INFO.:				
			JP 2002-265218	A 20020911
			JP 2003-79260	A 20030324
			WO 2003-JP11458	W 20030908

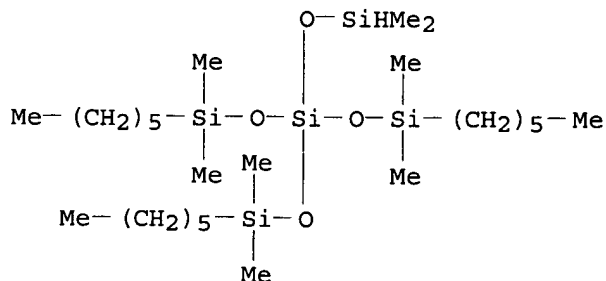
AB The present invention relates to (i) an organopolysiloxane-modified polysaccharide obtained by the esterification of (A) an organopolysiloxane having a carboxylic anhydride residue with (B) a polysaccharide having hydroxy groups, which the organopolysiloxane has been bonded to the polysaccharide through a half ester group and (ii) a process for producing an organopolysiloxane-modified polysaccharide by esterifying the ingredient (A) with the ingredient (B) in the presence of (C) an aprotic polar solvent. The modified polysaccharide comprising a polysaccharide and an organopolysiloxane bonded thereto through a half ester group is a novel polysaccharide. The process for producing the organopolysiloxane-modified polysaccharide enables an organopolysiloxane to be introduced into a polysaccharide to a high degree. Thus, 25 g dimethylsilyl end-capped polysiloxane and 3.38 g allyl succinic anhydride were reacted to give succinic anhydride end-capped polysiloxane, 0.05 g of which was reacted with 1.0 g cationized cellulose to give a polysiloxane-modified cationized cellulose.

IT 674784-86-2

RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of organopolysiloxane-modified polysaccharides)

RN 674784-86-2 CAPLUS

CN Trisiloxane, 3-[(dimethylsilyl)oxy]-1,5-dihexyl-3-  
[(hexyldimethylsilyl)oxy]-1,1,5,5-tetramethyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 5 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2004:234503 CAPLUS  
DOCUMENT NUMBER: 141:38966

TITLE: Synthesis of  $\omega$ -Si-H tetra-branched star PDMS.  
Conversion by photo-acid catalyzed crosslinking to films

AUTHOR(S): Cai, Guoping; Weber, William P.

CORPORATE SOURCE: Loker Hydrocarbon Research Inst., Dept. of Chemistry,  
U. of Southern California, Los Angeles, CA,  
90089-1661, USA

SOURCE: Polymer Preprints (American Chemical Society, Division  
of Polymer Chemistry) (2004), 45(1), 710-711  
CODEN: ACPPAY; ISSN: 0032-3934

PUBLISHER: American Chemical Society, Division of Polymer  
Chemistry

DOCUMENT TYPE: Journal; (computer optical disk)

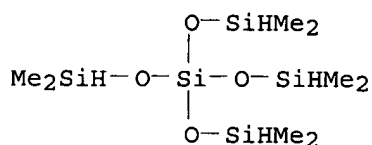
LANGUAGE: English

AB Acid catalyzed insertion of D4 into Si-O bonds of tetrakis(di-Me  
siloxyl)silane (I) yields irregular tetra-branched star polymers,  
tetrakis( $\omega$ -di methylsiloxyl)poly(dimethylsiloxyl)silane (II). Si-H  
bonds of II have been modified by Pt-catalyzed hydrosilation with  
4-vinylcyclohexane-1,2-epoxide (III) to yield a tetra-branched star PDMS  
with terminal epoxy groups (IV). Solns. of IV and a catalytic amount of  
Ar<sub>2</sub>I<sup>+</sup> SbF<sub>6</sub><sup>-</sup>, a photo-acid catalyst, were cast on glass  
slides and irradiated to yield crosslinked PDMS films (V). II and IV were  
characterized by <sup>1</sup>H, <sup>13</sup>C, and <sup>29</sup>Si NMR. Mw/Mn was determined by GPC, MALLS,  
and end groups anal. Viscosities were measured. Thermal stability by TGA  
and (Tg)s by DSC of II and IV were obtained. Loss (G'') and storage (G')  
shear moduli of V were measured by DMTA. Surface properties are shown by  
dynamic contact angles.

IT 17082-47-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(core; synthesis of  $\omega$ -Si-H tetra-branched star  
polydimethylsiloxanes, their epoxycyclohexane functionalization and  
photo-acid catalyzed crosslinking to films)

RN 17082-47-2 CAPLUS

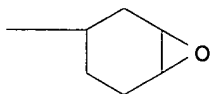
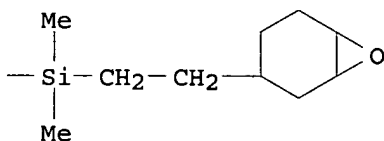
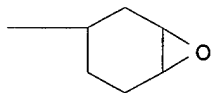
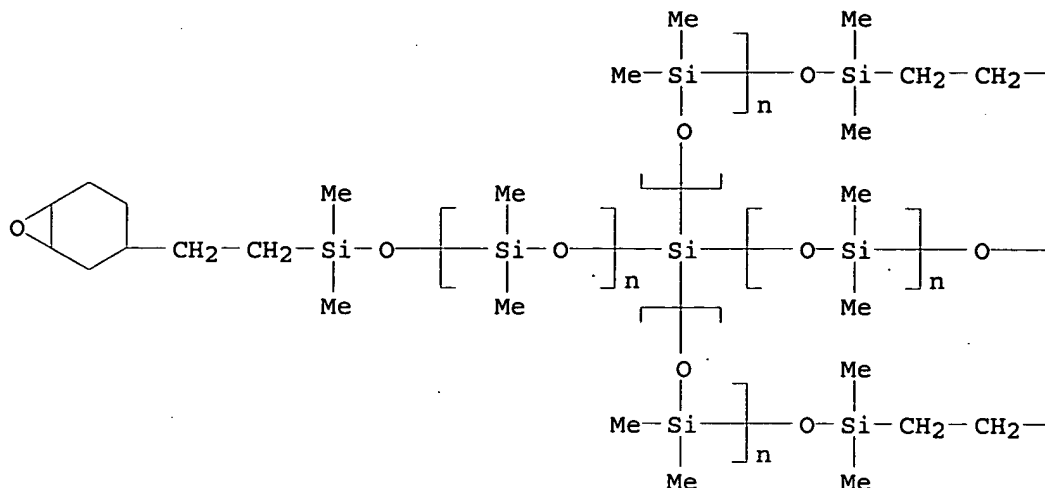
CN Trisiloxane, 3,3-bis[(dimethylsilyl)oxy]-1,1,5,5-tetramethyl- (9CI) (CA  
INDEX NAME)



IT 704916-01-8P  
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP  
(Preparation); RACT (Reactant or reagent)  
(synthesis of  $\omega$ -Si-H tetra-branched star polydimethylsiloxanes,  
their epoxycyclohexane functionalization and photo-acid catalyzed  
crosslinking to films)

RN 704916-01-8 CAPLUS

CN Poly[oxy(dimethylsilylene)],  $\alpha, \alpha', \alpha'', \alpha'''$ -  
silanetetrayltetrakis[ $\omega$ -[[dimethyl[2-(7-oxabicyclo[4.1.0]hept-3-  
yl)ethyl]silyl]oxy]- (9CI) (CA INDEX NAME)



IT 704916-02-9P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (synthesis of  $\omega$ -Si-H tetra-branched star polydimethylsiloxanes,  
 their epoxycyclohexane functionalization and photo-acid catalyzed  
 crosslinking to films)

RN 704916-02-9 CAPLUS

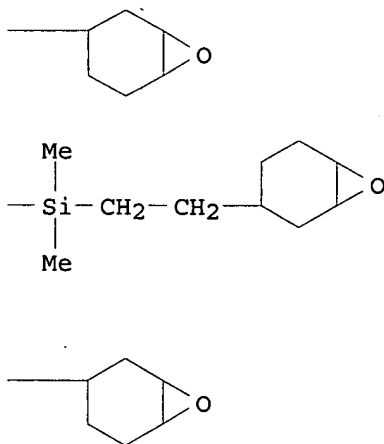
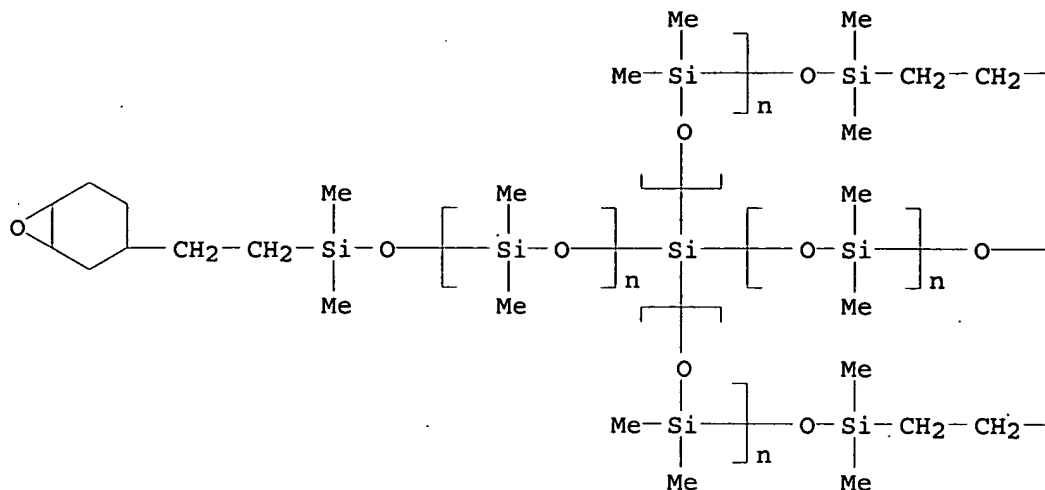
CN Poly[oxy(dimethylsilylene)],  $\alpha, \alpha', \alpha'', \alpha'''$ -  
 silanetetrayltetrakis[ $\omega$ -[[dimethyl[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]silyl]oxy]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 704916-01-8

CMF (C2 H6 O Si)n (C2 H6 O Si)n (C2 H6 O Si)n (C2 H6 O Si)n C40 H76 O8  
 Si5

CCI PMS



REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 6 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:529534 CAPLUS

DOCUMENT NUMBER: 133:135766

TITLE: Manufacture of organosilicon compounds and carbosiloxane dendrimers

INVENTOR(S): Onodera, Akira; Yoshitake, Makoto

PATENT ASSIGNEE(S): Dow Corning Toray Silicone Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2000212283	A2	20000802	JP 1999-18704	19990127
US 6147243	A	20001114	US 1999-447870	19991123
CA 2291205	AA	20000530	CA 1999-2291205	19991129
EP 1029885	A1	20000823	EP 1999-123670	19991129
EP 1029885	B1	20030521		

R: DE, FR, GB, IT, NL, SI, LT, LV, RO

KR 2000052395	A	20000825	KR 1999-53830	19991130
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PRIORITY APPLN. INFO.:

JP 1999-18704	A	19990127
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AB The organosilicon compds. are manufactured by reaction of organosilicon compds. (containing alkoxy groups bonded to Si) and R12SiOSiR12H (R1 = C1-10 hydrocarbyl) in alc.-containing acidic aqueous solns. and treatment of carboxylic acids and sulfonic acids. Thus, 235.4 g 1,1,3,3-tetramethylsiloxane was reacted with 222.6 g carbosiloxane dendrimer [prepared by reaction of vinyltrimethoxysilane and tetrakis(dimethylsiloxy)silane in the presence of chloroplatinic acid] in the presence of acetic acid and trifluoromethanesulfonic acid to give a dendrimer with average mol. weight 1866.

IT 286838-36-6P

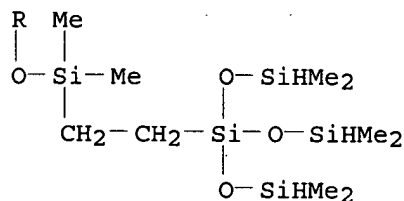
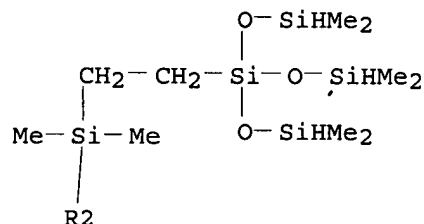
RL: IMF (Industrial manufacture); PREP (Preparation)

(manufacture of carbosiloxane dendrimers containing diorganosilyl groups)

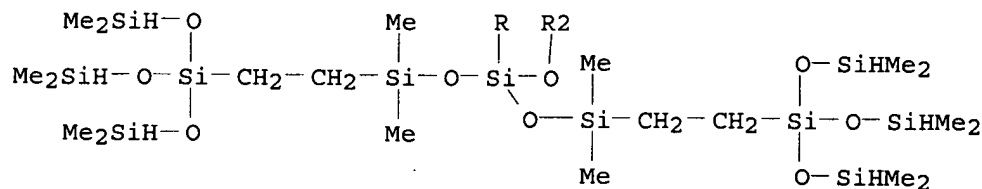
RN 286838-36-6 CAPLUS

CN Trisiloxane, 1,5-bis[2-[1,1-bis[(dimethylsilyl)oxy]-3,3-dimethyldisiloxanyl]-3,3-bis[[[2-[1,1-bis[(dimethylsilyl)oxy]-3,3-dimethyldisiloxanyl]ethyl]dimethylsilyl]oxy]-1,1,5,5-tetramethyl- (9CI)  
(CA INDEX NAME)

PAGE 1-A



PAGE 2-A



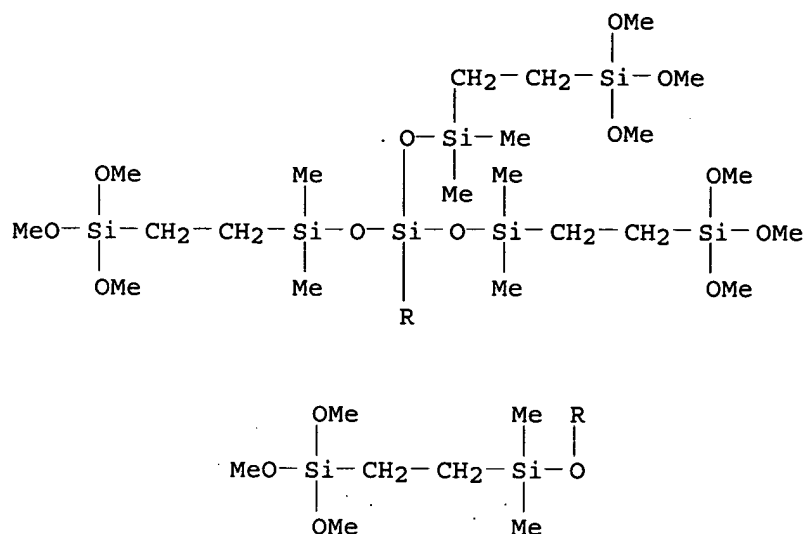
IT 162736-29-0P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(manufacture of carbosiloxane dendrimers containing diorganosilyl groups)

RN 162736-29-0 CAPLUS

CN 2,7,9,14-Tetraoxa-3,6,8,10,13-pentasilapentadecane, 8,8-bis[[dimethyl[2-(trimethoxysilyl)ethyl]silyl]oxy]-3,3,13,13-tetramethoxy-6,6,10,10-tetramethyl- (9CI) (CA INDEX NAME)



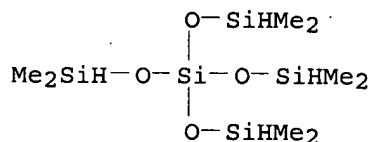
IT 17082-47-2, Tetrakis(dimethylsiloxyl)silane

RL: RCT (Reactant); RACT (Reactant or reagent)

(manufacture of carbosiloxane dendrimers containing diorganosilyl groups)

RN 17082-47-2 CAPLUS

CN Trisiloxane, 3,3-bis[(dimethylsilyl)oxy]-1,1,5,5-tetramethyl- (9CI) (CA INDEX NAME)



L10 ANSWER 7 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:208325 CAPLUS

DOCUMENT NUMBER: 132:348082

TITLE: Telechelic 4 and 6 branch star siloxanes by acid catalyzed incorporation of D4 units into the Si-O-Si bonds of tetra(dimethylsiloxyl)silane and hexa(dimethylsiloxyl)cyclotrisiloxane

AUTHOR(S): Sargent, Jonathan R.; Weber, William P.

CORPORATE SOURCE: D.P. and K.B. Loker Hydrocarbon Research Inst., Dept. of Chemistry, University of Southern California, Los Angeles, CA, 90089-1661, USA

SOURCE: Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2000), 41(1), 604-605

CODEN: ACPPAY; ISSN: 0032-3934

PUBLISHER: American Chemical Society, Division of Polymer Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The triflic acid catalyzes insertion of octamethylcyclotetrasiloxane and hexamethylcyclotrisiloxane into the Si-O-Si bonds of the

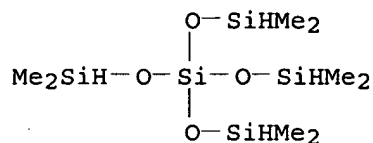
tetra(dimethylsiloxy)silane or hexa(dimethylsiloxy)cyclotrisiloxane to yield regular telechelic 4 or 6 star polymers with dimethylsiloxy end groups.

IT 17082-47-2

RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of telechelic 4 and 6 branch star siloxanes)

RN 17082-47-2 CAPLUS

CN Trisiloxane, 3,3-bis[(dimethylsilyl)oxy]-1,1,5,5-tetramethyl- (9CI) (CA INDEX NAME)



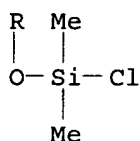
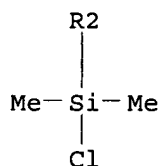
IT 102230-46-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation of telechelic 4 and 6 branch star siloxanes)

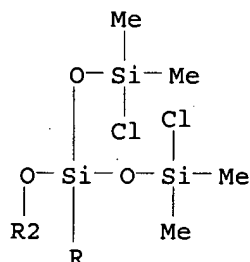
RN 102230-46-6 CAPLUS

CN Trisiloxane, 1,5-dichloro-3,3-bis[(chlorodimethylsilyl)oxy]-1,1,5,5-tetramethyl- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



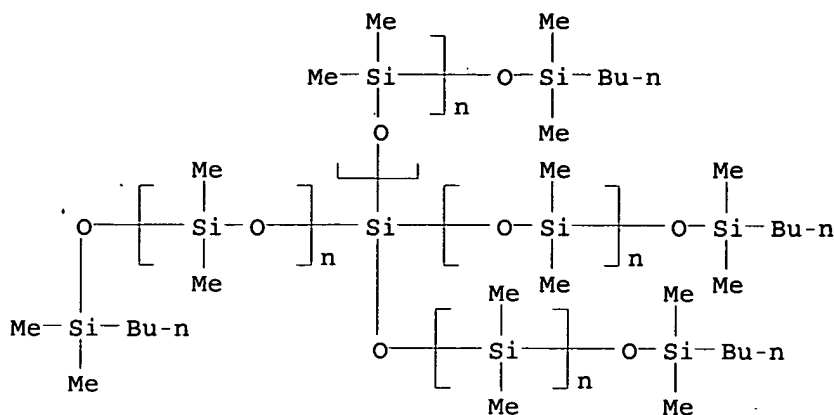
IT 269061-46-3P 713528-14-4P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of telechelic 4 and 6 branch star siloxanes)

RN 269061-46-3 CAPLUS

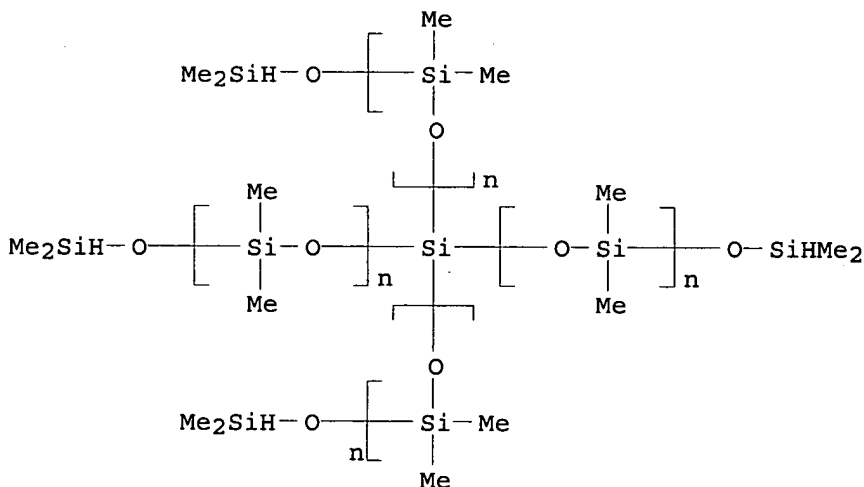
CN Poly[oxy(dimethylsilylene)],  $\alpha, \alpha', \alpha'', \alpha'''$ -silanetetrayltetrakis[ $\omega$ -[(butyldimethylsilyl)oxy]- (9CI) (CA INDEX

NAME)



RN 713528-14-4 CAPLUS

CN Poly[oxy(dimethylsilylene)],  $\alpha, \alpha', \alpha'', \alpha'''$ -  
silanetetrayltetrakis[ $\omega$ -[(dimethylsilyl)oxy]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 8 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:559058 CAPLUS

DOCUMENT NUMBER: 132:195863

TITLE: Thin coatings derived from cubic octasilicate monomers  
Li, Chenghong; Wilkes, Garth L.

AUTHOR(S): Polymer Materials and Interfaces Laboratory Department  
of Chemistry, Virginia Polytechnic Institute and State  
University, Blacksburg, VA, 24061, USA

SOURCE: Polymer Preprints (American Chemical Society, Division  
of Polymer Chemistry) (1999), 40(2), 778-779  
CODEN: ACPPAY; ISSN: 0032-3934

PUBLISHER: American Chemical Society, Division of Polymer  
Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Thin coatings on aluminum substrates were derived from dimethylsilyl or  
vinyltrimethylsilyl cubic octasilicates by reacting with other silanes via

hydrosilylation or by capping them with triethoxysilyl groups, followed by sol-gel reactions. The coating prepared by hydrosilylation showed an onset of thermal decomposition at 300° and had a weight loss of 5% in air at 370° at a temperature ramp of 10°/min. The coating developed by sol-gel reactions with a hydrochloric acid catalyst had a higher extent of condensation than the coating developed with an acetic acid catalyst, however, the former catalyst also caused obvious cage-opening of the silicate cubes. All these coatings were transparent, but lacked abrasion resistance.

IT 259740-80-2P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(preparation of thin coatings derived from cubic octasilicate monomers)

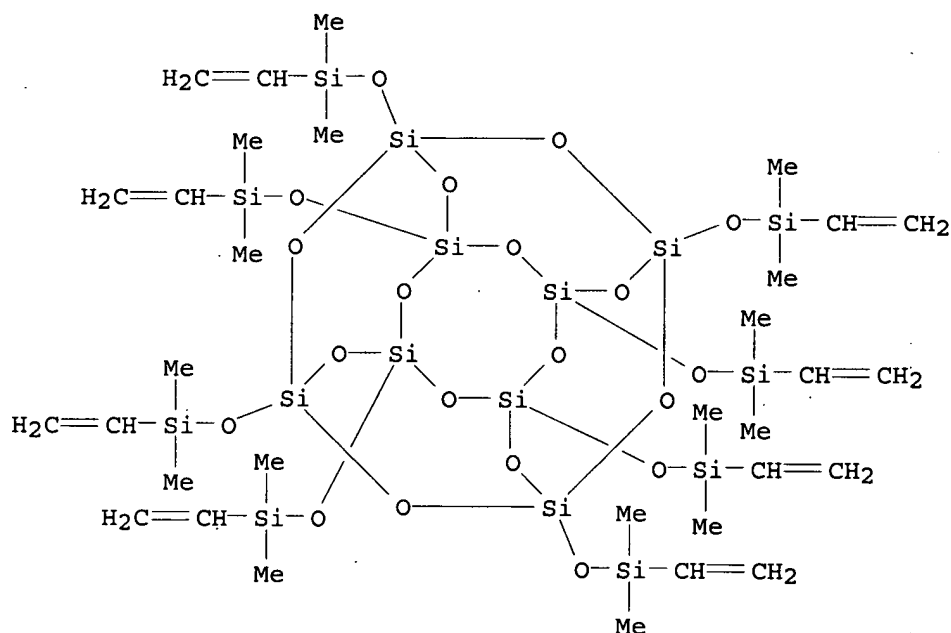
RN 259740-80-2 CAPLUS

CN Pentacyclo[9.5.1.13,9.15,15.17,13]octasiloxane,  
octakis[(ethenyldimethylsilyl)oxy]-, polymer with 3,3-  
bis[(dimethylsilyl)oxy]-1,1,5,5-tetramethyltrisiloxane and  
1,3-diethenyl-1,1,3,3-tetramethyldisiloxane (9CI) (CA INDEX NAME)

CM 1

CRN 126503-69-3

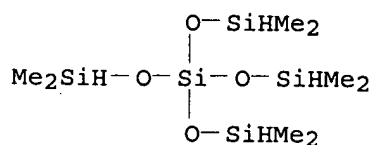
CMF C32 H72 O20 Si16



CM 2

CRN 17082-47-2

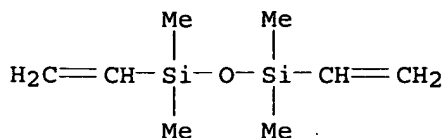
CMF C8 H28 O4 Si5



CM 3

CRN 2627-95-4

CMF C8 H18 O Si2



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 9 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:498252 CAPLUS

DOCUMENT NUMBER: 131:144711

TITLE: Preparation of silicones having siloxy-group

INVENTOR(S): Ohkawa, Tadashi

PATENT ASSIGNEE(S): Dow Corning Toray Silicone Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11217389	A2	19990810	JP 1998-29297	19980127
JP 3571521	B2	20040929		

PRIORITY APPLN. INFO.: JP 1998-29297 19980127

OTHER SOURCE(S): CASREACT 131:144711; MARPAT 131:144711

AB Silicones having R3SiO (R = monovalent organic group, H) group are prepared (A) by reaction of silicones having alkoxy or aryloxy group connected with Si with (R3Si)2O (I; R = same as above) in the presence of **carboxylic acids and acid catalysts** or (B) by reaction of silicones having acyloxy group connected with Si with I in the presence of **alcs. and acid catalysts**. 1,1,3,3-Tetramethyldisiloxane was condensed with tetramethoxysilane and HCO2H in the presence of F3CSO3H at 22-29° for 2 h to give 85.1% (HSiMe2O)4Si.

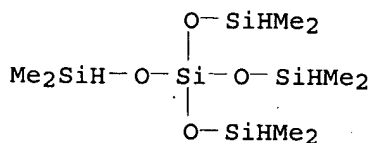
IT 17082-47-2P 60111-54-8P

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(preparation of siloxy-containing silicones by condensation of oxysilanes with disiloxanes and **carboxylic acids** or **alcs.** in the presence of **acid catalysts**)

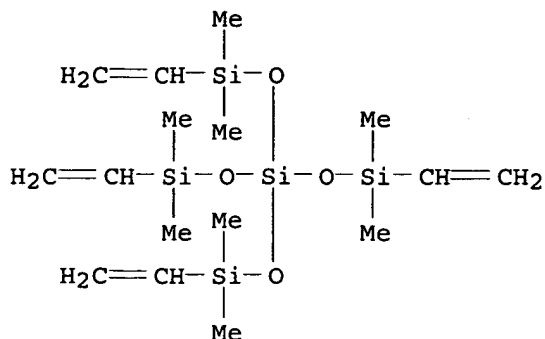
RN 17082-47-2 CAPLUS

CN Trisiloxane, 3,3-bis[(dimethylsilyl)oxy]-1,1,5,5-tetramethyl- (9CI) (CA INDEX NAME)



RN 60111-54-8 CAPLUS

CN Trisiloxane, 1,5-diethenyl-3,3-bis[(ethenyldimethylsilyl)oxy]-1,1,5,5-tetramethyl- (9CI) (CA INDEX NAME)



L10 ANSWER 10 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:11333 CAPLUS

DOCUMENT NUMBER: 124:88924

TITLE: Method for curing of polytitanosiloxanes for cured products with good solvent and heat resistances and high strength

INVENTOR(S): Suzuki, Toshio; Sugata, Yoko; Kushibiki, Nobuo

PATENT ASSIGNEE(S): Dow Corning K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07268101	A2	19951017	JP 1994-65170	19940401
JP 3542161	B2	20040714		
US 5596060	A	19970121	US 1995-414603	19950331

PRIORITY APPLN. INFO.: JP 1994-65170 A 19940401

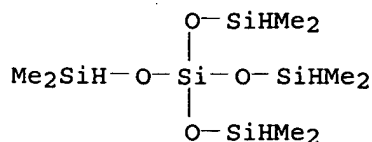
AB In the title method, alkenyl polytitanosiloxanes having  $\text{R}_1\text{aR}_2(3-\text{a})\text{SiO}_{1/2}$  ( $\text{R}_1$  = alkenyl;  $\text{R}_2$  = monovalent organic group;  $\text{a} = 0-3$ ) units,  $\text{SiO}_{4/2}$  units and  $\text{TiO}_{4/2}$  units are cured by using organic peroxides or its mixts. with Pt-based hydrosilylation catalysts in the presence of organopolysiloxanes having HSi groups. The cured products are useful for antireflection films. Thus, a mixture containing polytitanosiloxane  $[(\text{ViMe}_2\text{SiO}_{1/2})_{0.33}(\text{SiO}_{4/2})_{0.22}(\text{TiO}_{4/2})_{0.45}$  ( $\text{Vi}$  = vinyl); average mol. weight 25,000] 100, tetrakis(dimethylsiloxy)silane 60, chloroplatinic acid 0.001 (as Pt), and 3-methyl-1-butyn-3-ol 0.01 part was coated on a glass plate and cured at  $150^\circ$  for 3 h to give a cured product with good solvent resistance.

IT 17082-47-2, Tetrakis(dimethylsiloxy)silane

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(crosslinking agent; method for curing of polytitanosiloxanes for cured products with good solvent and heat resistances and high strength)

RN 17082-47-2 CAPLUS

CN Trisiloxane, 3,3-bis[(dimethylsilyl)oxy]-1,1,5,5-tetramethyl- (9CI) (CA INDEX NAME)



L10 ANSWER 11 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:563196 CAPLUS

DOCUMENT NUMBER: 122:316393

TITLE: Chiral polymeric adsorbents, tartaric acid derivatives as monomers, their preparation and use

INVENTOR(S): Moeller, Per; Sanchez, Domingo; Allenmark, Stig; Andersson, Shalini

PATENT ASSIGNEE(S): EKA Nobel AB, Swed.

SOURCE: PCT Int. Appl., 29 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9412275	A1	19940609	WO 1993-SE1050	19931203
W: AU, BB, BG, BR, BY, CA, CZ, FI, HU, JP, KP, KR, KZ, LK, LV, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, US, UZ, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
SE 9203646	A	19940524	SE 1992-3646	19921203
SE 500248	C2	19940524		
CA 2150712	AA	19940609	CA 1993-2150712	19931203
CA 2150712	C	20010814		
AU 9456635	A1	19940622	AU 1994-56635	19931203
EP 671975	A1	19950920	EP 1994-902169	19931203
EP 671975	B1	19980722		
EP 671975	B2	20020703		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
HU 71094	A2	19951128	HU 1995-1617	19931203
HU 217987	B	20000528		
JP 08504127	T2	19960507	JP 1994-513063	19931203
JP 3212093	B2	20010925		
AT 168586	E	19980815	AT 1994-902169	19931203
ES 2119999	T3	19981016	ES 1994-902169	19931203
RU 2121395	C1	19981110	RU 1995-113505	19931203
BR 9307571	A	19990615	BR 1993-7571	19931203
CZ 290687	B6	20020911	CZ 1995-1398	19931203
FI 9502652	A	19950531	FI 1995-2652	19950531
NO 9502202	A	19950728	NO 1995-2202	19950602
NO 305195	B1	19990419		
US 6277782	B1	20010821	US 1995-448430	19950626
US 6333426	B1	20011225	US 1999-408581	19990928
PRIORITY APPLN. INFO.:			SE 1992-3646	A 19921203
			WO 1993-SE1050	W 19931203
			US 1995-448430	A3 19950626

AB Optically active adsorbents are based on crosslinked polymers of dicarboxylic acids, diamines, or diols which are chemical bonded to a carrier. The monomers [e.g., (+)-N,N'-bis( $\alpha$ -phenylethyl)-L-tartaric diamide O,O'-dimethacrylate] can be polymerized by radical polymerization or by hydrosilylation in the presence of a solid carrier. The adsorbents are useful for chromatog. separation of racemic mixts. of enantiomers, especially in pharmaceutical synthesis.



IT 163209-02-7P 163209-03-8P 163379-20-2P

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP (Preparation); USES (Uses)  
(chiral polymeric adsorbents)

RN 163209-02-7 CAPLUS

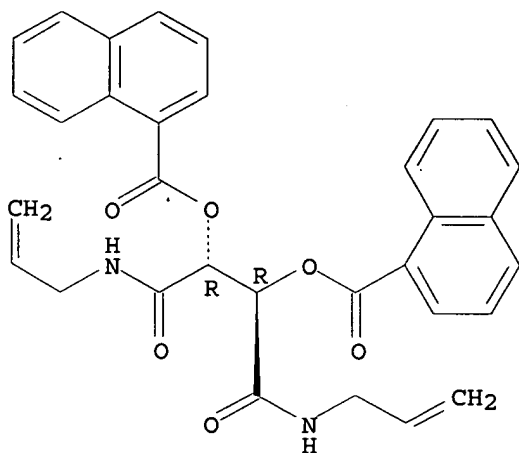
CN 1-Naphthalenecarboxylic acid, 1,2-bis[(2-propenylamino)carbonyl]-1,2-ethanediyl ester, [R-(R\*,R\*)]-, polymer with 3,3-bis[(dimethylsilyl)oxy]-1,1,5,5-tetramethyltrisiloxane and silica, graft (9CI) (CA INDEX NAME)

CM 1

CRN 163209-01-6

CMF C32 H28 N2 O6

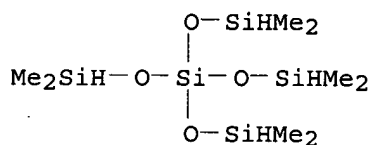
Absolute stereochemistry.



CM 2

CRN 17082-47-2

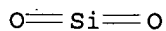
CMF C8 H28 O4 Si5



CM 3

CRN 7631-86-9

CMF O2 Si



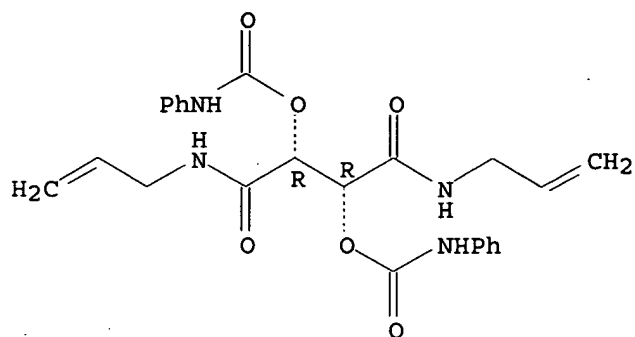
RN 163209-03-8 CAPLUS

CN Butanediamide, 2,3-bis[[(phenylamino)carbonyl]oxy]-N,N'-di-2-propenyl-, [R-(R\*,R\*)]-, polymer with 3,3-bis[(dimethylsilyl)oxy]-1,1,5,5-tetramethyltrisiloxane and silica, graft (9CI) (CA INDEX NAME)

CM 1

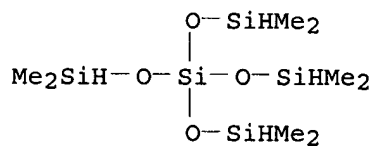
CRN 163208-99-9  
CMF C24 H26 N4 O6

Absolute stereochemistry.



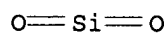
CM 2

CRN 17082-47-2  
CMF C8 H28 O4 Si5



CM 3

CRN 7631-86-9  
CMF O2 Si

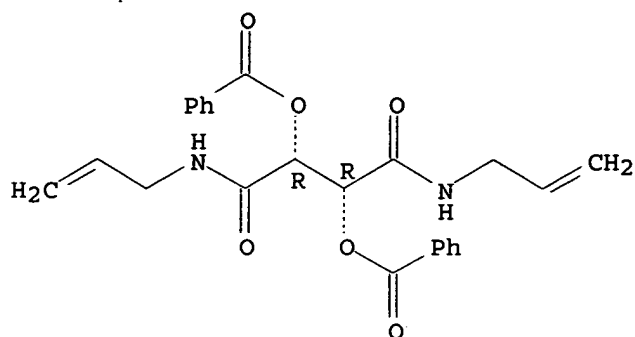


RN 163379-20-2 CAPLUS  
CN Butanediamide, 2,3-bis(benzoyloxy)-N,N'-di-2-propenyl-, [R-(R\*,R\*)]-, polymer with 3,3-bis[(dimethylsilyl)oxy]-1,1,5,5-tetramethyltrisiloxane and silica, graft (9CI) (CA INDEX NAME)

CM 1

CRN 163379-18-8  
CMF C24 H24 N2 O6

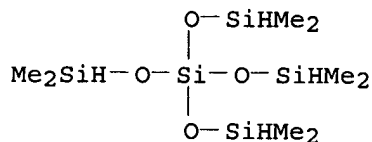
Absolute stereochemistry.



CM 2

CRN 17082-47-2

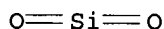
CMF C8 H28 O4 Si5



CM 3

CRN 7631-86-9

CMF O2 Si



L10 ANSWER 12 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:529118 CAPLUS

DOCUMENT NUMBER: 123:200689

TITLE: Curable compositions containing thermosetting resins and organosilicates

INVENTOR(S): Morita, Yoshiji; Sasaki, Atsushi; Tachibana, Takashi

PATENT ASSIGNEE(S): Dow Corning Toray Silicone, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

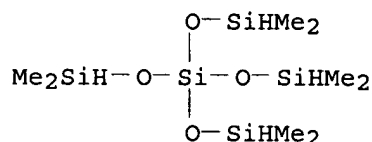
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07053870	A2	19950228	JP 1993-225165	19930818
JP 3466239	B2	20031110		

PRIORITY APPLN. INFO.: JP 1993-225165 19930818

AB The title comps. with good fluidity, giving cured products with good flexibility and adhesion comprise (A) 100 parts thermosetting resins and (B) 0.1-500 parts organosilicates containing  $\geq 1$  alkoxyalkylalkyl group and  $\geq 1$  C $\geq 6$  alkyl group shown as (R<sub>2</sub>SiR<sub>1</sub>2O)<sub>a</sub>(R<sub>3</sub>SiR<sub>1</sub>2O)<sub>b</sub>(SiO<sub>2</sub>)<sub>c</sub> [R<sub>1</sub> = C $\leq 5$  lower alkyl, Ph; R<sub>2</sub> = C $\leq 5$  lower alkyl, Ph, H; R<sub>3</sub> = epoxy group-containing organic groups,

alkoxysilylalkyl, C<sub>2</sub>6 alkyl; a ≥ 0 integral number; b, c > 0 integral number; a/c = 0-4, b/c = 0.05-4, (a + b)/c = 0.2-4]. Thus, organosilicate I with viscosity 24 cP and refractive index 1.4358 prepared by treating tetrakis(dimethylsiloxy)silane, allyltrimethoxysilane, and 1-octadecene in the presence of chloroplatinic acid in PhMe was blended with phenol novolak resin (softening point 80°, OH equiv 100) 100, fused SiO<sub>2</sub> 185.7, hexamethylenetetramine 11.4, 3-glycidoxypropyltrimethoxysilane 1.0, and carnauba wax 2.9 parts, kneaded at 90°, cooled to give a curable composition, crushed, transfer molded at 175° for 3 min, and post cured at 150° for 2 h to give a test piece with spiral flow 39 in., molding shrinkage 0.23%, heat expansion ratio 1.19+10<sup>-5</sup>/°C, glass temperature 161°, bending elasticity 1200 kg/mm<sup>2</sup>, and water absorption ratio 0.39%.

IT 17082-47-2DP, reaction products with allyltrimethoxysilane and 1-octadecene  
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation) (curable compns. with good fluidity comprising thermosetting resins and organosilicates containing alkoxysilylalkyl groups and alkyl groups for products with good flexibility, adhesion, and water resistance)  
 RN 17082-47-2 CAPLUS  
 CN Trisiloxane, 3,3-bis[(dimethylsilyl)oxy]-1,1,5,5-tetramethyl- (9CI) (CA INDEX NAME)



L10 ANSWER 13 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:331686 CAPLUS

DOCUMENT NUMBER: 123:294501

TITLE: Single-component inorganic/organic network materials, their preparation, method for modifying sol-gel glass and for coating substrates, and the network materials obtained

INVENTOR(S): Michalczyk, Michael J.; Sharp, Kenneth G.

PATENT ASSIGNEE(S): du Pont de Nemours, E. I., and Co., USA

SOURCE: U.S., 22 pp. Cont.-in-part of U.S. Ser. No. 945,777, abandoned.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5378790	A	19950103	US 1993-120995	19930913
WO 9406807	A1	19940331	WO 1993-US8685	19930915
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 660839	A1	19950705	EP 1993-921578	19930915
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
JP 08505363	T2	19960611	JP 1993-508262	19930915
AT 197713	E	20001215	AT 1993-921578	19930915
CA 2144639	C	20020723	CA 1993-2144639	19930915
US 5548051	A	19960820	US 1995-512246	19950807
PRIORITY APPLN. INFO.:				B2 19920916
				A 19930913
				W 19930915

OTHER SOURCE(S): MARPAT 123:294501

AB The inorg./organic compns. have idealized empirical formula  $X(\text{SiO}_{1.5})_n$  (I) [ $n = \text{integer} \geq 2$ ; X is  $\geq 1$  flexible organic links selected from (a)  $\text{R}_1\text{mSiY}_4\text{-m}$ ; (b) ring structures Ia, Ib, and Ic (c)  $\text{R}_1\text{mSi}(\text{OSi}(\text{CH}_3)_2\text{Y})_4\text{-m}$ ; (d)  $\text{R}_1\text{mSi}(\text{OY})_4\text{-m}$ ; (e)  $\text{MeSiY}_2\text{-O-SiY}_2\text{Me}$ ; (f)  $\text{Y}(\text{Me})_2\text{Si-C}_6\text{H}_4\text{-Si}(\text{Me})_2\text{Y}$ ; (g)  $\text{O}[-\text{C}_6\text{H}_4\text{-Si}(\text{Me})_2\text{Y}]_2$ ; (h)  $\text{O}[\text{Si}(\text{Me})_2\text{Y}]_2$ ; (i)  $\text{Y}(\text{Me})_2\text{SiCH}_2\text{-CH}_2\text{Si}(\text{Me})_2\text{Y}$ ; (j)  $\text{Y}_3\text{SiOSiY}_3$ ; (k)  $\text{Y}_3\text{Si}(\text{CH}_2)_b\text{SiY}_3$ ; (l)  $\text{Y}_3\text{SiC}_6\text{H}_4\text{SiY}_3$ ; (m) substituted benzene selected from (1)  $\text{C}_6\text{H}_3(\text{SiZ}_3\text{-aYa})_3$ ; (2)  $\text{C}_6\text{H}_2(\text{SiZ}_3\text{-aYa})_4$ ; (3)  $\text{C}_6\text{H}(\text{SiZ}_3\text{-aYa})_5$ ; and (4)  $\text{C}_6(\text{SiZ}_3\text{-aYa})_6$ ; and (n) substituted cyclohexane selected from (1) 1,2- $\text{C}_6\text{H}_{10}(\text{Y})_2$ ; 1,3- $\text{C}_6\text{H}_{10}(\text{Y})_2$ ; 1,4- $\text{C}_6\text{H}_{10}(\text{Y})_2$ ; (2) 1,2,4- $\text{C}_6\text{H}_9(\text{Y})_3$ ; 1,2,3- $\text{C}_6\text{H}_9(\text{Y})_3$ ; 1,3,5- $\text{C}_6\text{H}_9(\text{Y})_3$ ; (3) 1,2,3,4- $\text{C}_6\text{H}_8(\text{Y})_4$ ; 1,2,4,5- $\text{C}_6\text{H}_8(\text{Y})_4$ ; 1,2,3,5- $\text{C}_6\text{H}_8(\text{Y})_4$ ; (4) 1,2,3,4,5- $\text{C}_6\text{H}_7(\text{Y})_5$ ; and (5)  $\text{C}_6\text{H}_6(\text{Y})_6$ ; Z = C1-4-alkyl, 3,3,3-trifluoropropyl, aralkyl, or aryl; Y = (CR<sub>2</sub>R<sub>3</sub>)kCR<sub>4</sub>R<sub>5</sub>CR<sub>6</sub>R<sub>7</sub> (CR<sub>8</sub>R<sub>9</sub>)h-; R<sub>1</sub> = C1-8-alkyl or aryl; independently, R<sub>2</sub>-R<sub>9</sub> = H, C1-8-alkyl or aryl, provided that  $\geq 1$  of R<sub>4</sub> to R<sub>7</sub> is H; m = 0, 1 or 2; independently, k, h = integer 0-10, provided that  $\geq 1$  of k or h is 0; a = 1, 2 or 3; p = even integer 4-10; and b = integer 1-10]. The compns. are prepared by mixing  $\geq 1$  compds. having general formula  $\text{X}(\text{SiQ}_3)_n$  (II) (Q = C1-8-alkoxy; n and X as above) with water, a solvent, and a catalyst, or with  $\geq 1$  carboxylic acids having pKa .ltorsim.4 and containing 0-20 mol.% water, and, optionally, a solvent, and isolating the resulting inorg./organic component of formula I. The modification of the sol-gel glass, to obtain a sol-gel glass that tolerates higher drying rates and is less brittle, is carried out by combining a star gel precursor of formula II with an inorg. alkoxide sol-gel precursor, water, a solvent, and a catalyst, or with  $\geq 1$  carboxylic acids having pKa .ltorsim.4 and containing 0-20 mol.% water, and, optionally, a solvent, and drying the material.  $\text{Si}[\text{CH}_2\text{CH}_2\text{Si}(\text{OEt})_3]_4$  was prepared by dropwise adding 5.219 g tetravinylsilane to a mixture of 55.596 g triethoxysilane and .apprx.0.3 mL Pt catalyst over 1 h, heating the solution at 90° for 6 h, and cooling and stirring the solution for 18 h. After removal of excess triethoxysilane at 60° in vacuum, the residual vinyl groups were reacted with 11.842 g triethoxysilane in the presence of 4 drops Pt catalyst, and the mixture heated as above.

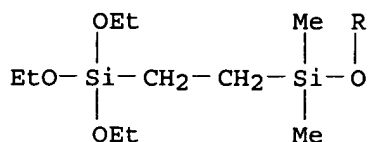
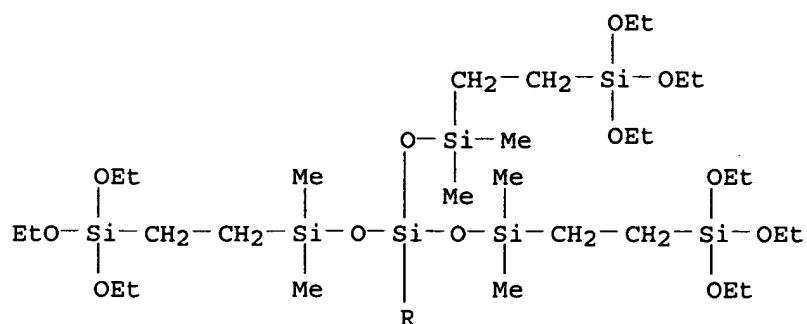
IT 155881-78-0P 155881-87-1P

RL: PNU (Preparation, unclassified); PREP (Preparation)

(preparation of single-component inorg./organic network materials for modifying sol-gel glass and for coating substrates)

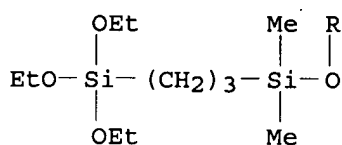
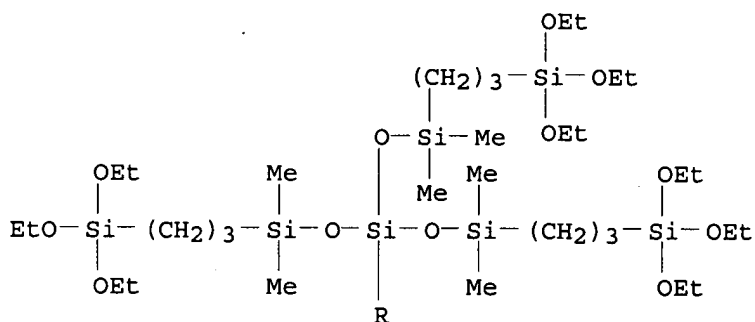
RN 155881-78-0 CAPLUS

CN 3,8,10,15-Tetraoxa-4,7,9,11,14-pentasilheptadecane, 9,9-bis[[dimethyl[2-(triethoxysilyl)ethyl]silyl]oxy]-4,4,14,14-tetraethoxy-7,7,11,11-tetramethyl- (9CI) (CA INDEX NAME)



RN 155881-87-1 CAPLUS

CN 3,9,11,17-Tetraoxa-4,8,10,12,16-pentasilanonadecane, 10,10-bis[[dimethyl[3-(triethoxysilyl)propyl]silyl]oxy]-4,4,16,16-tetraethoxy-8,8,12,12-tetramethyl- (9CI) (CA INDEX NAME)



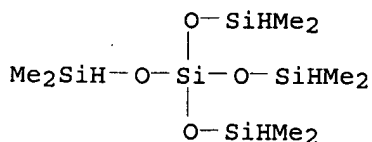
IT 17082-47-2

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of single-component inorg./organic network materials for modifying sol-gel glass and for coating substrates)

RN 17082-47-2 CAPLUS

CN Trisiloxane, 3,3-bis[(dimethylsilyl)oxy]-1,1,5,5-tetramethyl- (9CI) (CA INDEX NAME)



ACCESSION NUMBER: 1993:149403 CAPLUS  
 DOCUMENT NUMBER: 118:149403  
 TITLE: Siloxanes in curable polyurethane compositions for breathable waterproof textiles  
 INVENTOR(S): McVie, James; Rowlands, Martin  
 PATENT ASSIGNEE(S): Dow Corning Ltd., UK  
 SOURCE: Eur. Pat. Appl., 11 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 503826	A1	19920916	EP 1992-301837	19920304
EP 503826	B1	19970702		
R: BE, DE, ES, FR, GB, IT, NL, SE				
US 5246996	A	19930921	US 1992-844090	19920302
CA 2062334	AA	19920915	CA 1992-2062334	19920305
CA 2062334	C	19980825		
JP 05086198	A2	19930406	JP 1992-58400	19920316
US 5397824	A	19950314	US 1993-51417	19930423
PRIORITY APPLN. INFO.:			GB 1991-5371	A 19910314
			US 1992-844090	A3 19920302

OTHER SOURCE(S): MARPAT 118:149403

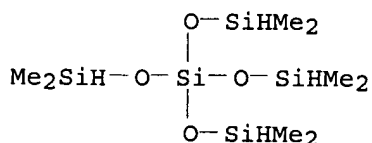
AB Neopentasiloxanes Si(OSiR<sub>2</sub>Q)<sub>4</sub> [I; R = C<8 (halo)alkyl, preferably Me; Q = C<sub>8</sub>H<sub>2</sub>s(OCH<sub>2</sub>CH<sub>2</sub>)<sub>n</sub>(OC<sub>3</sub>H<sub>6</sub>)<sub>m</sub>OH, 1 of Q can be = R; s = 3-6; m = 0-80; n = 5-100; n > m] were prepared and used in film-forming curable polyurethane compns. for breathable waterproof textiles. Thus, hydrosilylation of neopentasiloxane Si(OSiMe<sub>2</sub>H)<sub>4</sub> with allyl-terminated polyoxyalkylene CH<sub>2</sub>:CHCH<sub>2</sub>(OCH<sub>2</sub>CH<sub>2</sub>)<sub>5</sub>OH in PhMe, in the presence of NaOAc and chloroplatinic acid catalyst, gave the title neopentasiloxane [I; R = Me, Q = (CH<sub>2</sub>)<sub>3</sub>(OCH<sub>2</sub>CH<sub>2</sub>)<sub>5</sub>OH] (II). A composition comprising Larithane B-850 (2-component aromatic polyester-polyurethane) 100, Larithane CL3A (a melamine-formaldehyde resin crosslinker) 7.5, Larithane CT3A (p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H catalyst solution) 1.5, a matting agent 3, and II 12.5 parts was coated onto a nylon fabric to give breathability of 60% (88.7% for a free film), vs. 21% (62.7%) for a similar composition without II.

IT 17082-47-2

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (hydrosilylation by, of polyoxyethylene allyl ether, in preparation of curable polyurethane compns. for breathable waterproof textiles)

RN 17082-47-2 CAPLUS

CN Trisiloxane, 3,3-bis[(dimethylsilyl)oxy]-1,1,5,5-tetramethyl- (9CI) (CA INDEX NAME)



IT 146648-16-0P

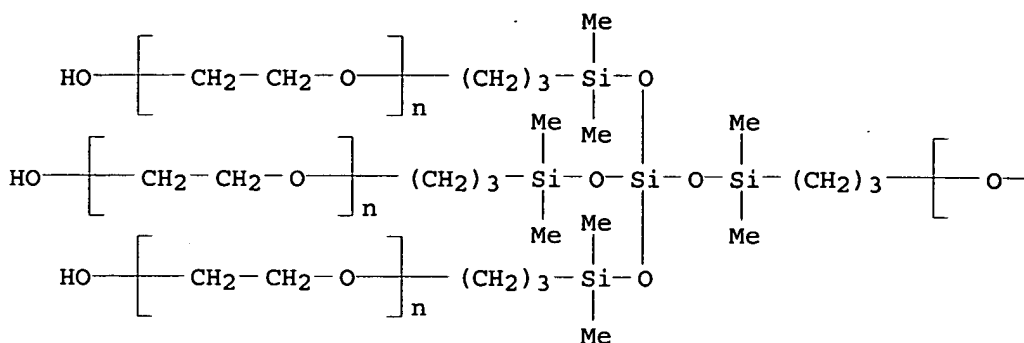
RL: IMF (Industrial manufacture); PREP (Preparation)  
 (preparation of, for curable polyurethane composition for breathable waterproof textiles)

RN 146648-16-0 CAPLUS

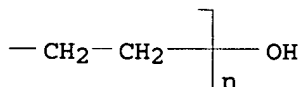
CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -hydro- $\omega$ -hydroxy-, ether with

3,3'-[3,3-bis[[(3-hydroxypropyl)dimethylsilyl]oxy]-1,1,5,5-tetramethyl-1,5-trisiloxanediyl]bis[1-propanol] (4:1) (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L10 ANSWER 15 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1990:613391 CAPLUS

DOCUMENT NUMBER: 113:213391

TITLE: Crosslinking of methylhydrosiloxanes in presence of allyl esters and Group VIII metal catalysts

INVENTOR(S): Revis, Anthony

PATENT ASSIGNEE(S): Dow Corning Corp., USA

SOURCE: U.S., 6 pp.  
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4954401	A	19900904	US 1989-392320	19890811
US 4954597	A	19900904	US 1989-418596	19891010
EP 412564	A2	19910213	EP 1990-115410	19900810
EP 412564	A3	19920102		
EP 412564	B1	19951206		
R: DE, FR, GB				
JP 03084064	A2	19910409	JP 1990-210587	19900810

PRIORITY APPLN. INFO.: US 1989-392320 A2 19890811

AB Methylhydrosiloxanes (I) are cured by contacting and forming a mixture with an allyl ester in the presence of a Group VIII metal catalyst and heating the mixture in the presence of ambient moisture. Thus, a solution of I 20, allyl acetate 2, and RhCl<sub>3</sub>.3H<sub>2</sub>O (10 g in 12 g THF) 0.2 g was coated on the bottom of a Al pan and heated at 125° for 5 min to give a cured, clear, and colorless film.

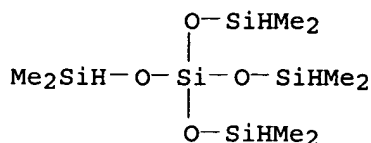
IT 17082-47-2, Tetrakis(dimethylsiloxy)silane



RL: RCT (Reactant); RACT (Reactant or reagent)  
(crosslinking of, with allyl esters, catalysts for)

RN 17082-47-2 CAPLUS

CN Trisiloxane, 3,3-bis[(dimethylsilyl)oxy]-1,1,5,5-tetramethyl- (9CI) (CA INDEX NAME)



L10 ANSWER 16 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1990:612063 CAPLUS

DOCUMENT NUMBER: 113:212063

TITLE: On the condensation behavior of silanols. VI. The competition of silanol condensation and siloxane splitting at the acid catalyzed reaction of siloxanols

AUTHOR(S): Sarich, W.; Surkus, A.; Lange, D.; Popowski, E.; Kelling, H.

CORPORATE SOURCE: Sekt. Chem., Wilhelm Pieck Univ., Rostock, Ger. Dem. Rep.

SOURCE: Zeitschrift fuer Anorganische und Allgemeine Chemie (1990), 581, 199-208

CODEN: ZAACAB; ISSN: 0044-2313

DOCUMENT TYPE: Journal

LANGUAGE: German

OTHER SOURCE(S): CASREACT 113:212063

AB Siloxanols of the type  $(\text{Me}_3\text{SiO})_n\text{Me}_3\text{-nSiOH}$  ( $n = 1-3$ ) as well as  $\text{Me}_3\text{SiOSiMe}_2\text{OSiMe}_2\text{OH}$  react in aqueous dioxane in the presence of an acid catalyst ( $\text{HCl}$ ,  $\text{HClO}_4$ ) preferably by siloxane splitting and only by a small part of self-condensation. The low mol. products of the consecutive reactions like the condensation of the primary splitting products with the starting siloxanols and the following condensation- and splitting reactions have been determined by GLC. After a sufficient reaction time product mixts. result, which are analogous to those of the reaction of comparable OH-free methylsiloxanes under same conditions. For  $(\text{ClCH}_2)_2\text{Me}_2\text{SiOSiMe}_2\text{OH}$  self-condensation dominates. The rate consts. have been determined for the concentration decrease of the siloxanols as

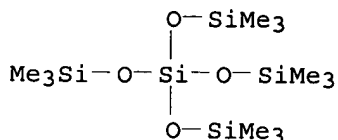
well as for the condensation of the siloxanols with  $\text{Me}_3\text{SiOH}$ .

IT 3555-47-3P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 3555-47-3 CAPLUS

CN Trisiloxane, 1,1,1,5,5,5-hexamethyl-3,3-bis[(trimethylsilyl)oxy]- (9CI)  
(CA INDEX NAME)



L10 ANSWER 17 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1990:459529 CAPLUS

DOCUMENT NUMBER: 113:59529

TITLE: Process for preparing silicon esters from silicon

INVENTOR(S): hydrides and alkyl esters  
 Revis, Anthony  
 PATENT ASSIGNEE(S): Dow Corning Corp., USA  
 SOURCE: U.S., 5 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4912242	A	19900327	US 1989-351639	19890515
JP 03056493	A2	19910312	JP 1990-121392	19900514
PRIORITY APPLN. INFO.: US 1989-351639			A	19890515

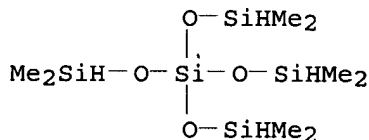
OTHER SOURCE(S): CASREACT 113:59529; MARPAT 113:59529

AB Silicon esters (acyloxysilanes, acyloxysiloxanes), useful as silylating agents and crosslinking agents for silicone sealants (no data), were prepared by reaction of an allyl ester with a Si hydride (<1:1 molar ratio) in the presence of a Group VIII catalyst. Thus, a mixture of H<sub>2</sub>C:CHCH<sub>2</sub>OAc, RhCl<sub>3</sub>, Me<sub>3</sub>SiH, THF, and PhMe was stirred 24 h at room temperature to give 60% Me<sub>3</sub>SiOAc.

IT 17082-47-2, Tetrakis(dimethylsiloxy)silane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (acyloxylation of, with allyl esters)

RN 17082-47-2 CAPLUS

CN Trisiloxane, 3,3-bis[(dimethylsilyl)oxy]-1,1,5,5-tetramethyl- (9CI) (CA INDEX NAME)



L10 ANSWER 18 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1968:13045 CAPLUS

DOCUMENT NUMBER: 68:13045

TITLE: Clay-catalyzed reactions in organosilicon chemistry.  
 The interchange of hydrogen and siloxy ligands on silicon

AUTHOR(S): Stewart, Howard Franklin

CORPORATE SOURCE: Dow Corning Corp., Midland, MI, USA

SOURCE: Journal of Organometallic Chemistry (1967), 10(2), 229-34

CODEN: JORCAI; ISSN: 0022-328X

DOCUMENT TYPE: Journal

LANGUAGE: English

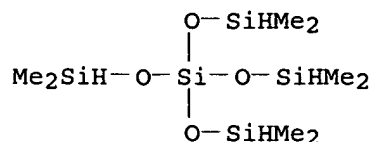
AB Naturally occurring clays and silica-alumina are unique acid catalyst for the exchange of H and siloxy ligands on silicon. The interchange of ligands is reversible and intermol. with a tendency for like ligands to accumulate on the same silicon. The reactivity of various catalysts with hydride functional siloxanes are summarized, and possible reaction mechanisms are suggested.

IT 17082-47-2

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (polymerization of, catalysts in, clay minerals as)

RN 17082-47-2 CAPLUS

CN Trisiloxane, 3,3-bis[(dimethylsilyl)oxy]-1,1,5,5-tetramethyl- (9CI) (CA INDEX NAME)



L10 ANSWER 19 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1965:455269 CAPLUS

DOCUMENT NUMBER: 63:55269

ORIGINAL REFERENCE NO.: 63:10121h,10122a-b

TITLE: Synthesis of polysiloxanes, containing trimethylsiloxy end groups by the method of heterocondensation

AUTHOR(S): Borisov, S. N.; Sviridova, N. G.

SOURCE: Plasticheskie Massy (1965), (6), 24-8

CODEN: PLMSAI; ISSN: 0554-2901

DOCUMENT TYPE: Journal

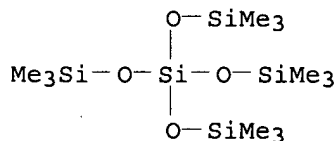
LANGUAGE: Russian

AB The linear heterocondensations of mono- and bis(trimethylsiloxy)chloro- and alkoxysilanes with dimethyldiacetoxysilane or Ac<sub>2</sub>O in the presence of FeCl<sub>3</sub> are complicated by secondary reactions between the liberated products of the condensation and the polymeric products. Tetrakis(trimethylsiloxy)silane (I) reacts with AcCl at its b.p. in the absence of any catalyst, and the distillate contd. Si<sup>4</sup>-containing compds. I also reacts with AcOEt in the presence of FeCl<sub>3</sub>. The Me<sub>2</sub>SiO group of methyl(trimethylsiloxy)dibutoxysilane (II) reacts with AcCl and AcOEt in the absence of catalyst giving Si-containing compds. in the distillate. Therefore, if Me<sub>2</sub>SiO groups are required in the product, the other component in the heterocondensation must not be a derivative of AcOH. Cyclic products are obtained by the heterocondensation of Me<sub>2</sub>SiCl<sub>2</sub> and trimethylsiloxychlorosilanes with tetramethyldisiloxanediol in the presence of a HCl acceptor (dimethylaniline). Linear products are obtained with higher mol.-weight siloxanediols. The prepns. of 2 new products, methyl(trimethylsiloxy)diethoxysilane, b. 153.5-55°, n<sub>20</sub>D 1.3867, d<sub>20</sub> 0.8748, and II, b. 215-17°, n<sub>20</sub>D 1.4039, d<sub>20</sub> 0.8731, are described.

IT 3555-47-3, Trisiloxane, 1,1,1,5,5,5-hexamethyl-3,3-bis(trimethylsiloxy)-(preparation of)

RN 3555-47-3 CAPLUS

CN Trisiloxane, 1,1,1,5,5,5-hexamethyl-3,3-bis[(trimethylsilyl)oxy]-(9CI)  
(CA INDEX NAME)



L10 ANSWER 20 OF 20 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1961:96693 CAPLUS

DOCUMENT NUMBER: 55:96693

ORIGINAL REFERENCE NO.: 55:18191f-h

TITLE: Preventing the discoloration of poly(vinyl chloride)

INVENTOR(S): Bauer, Hans; Heckmaier, Joseph

PATENT ASSIGNEE(S): Wacker-Chemie G. m. b. H.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

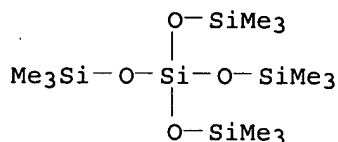
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1083550		19600615	DE	
GB 895978			GB	

AB The polymerization of vinyl chloride (I), possibly in mixts. with other monomeric vinyl compds., occurs in the presence of an inorg. acid having a dissociation constant of  $<10^{-9}$ . The acid and (or) its anhydride is added in amts. of  $<3\%$  by weight based on the monomer. Suitable are boric or silicic acid or  $\text{SiO}_2$ . For example, 150 kg.  $\text{H}_2\text{O}$ , and 75 kg. I were stirred with poly(vinyl alc.) 112, didodecyl peroxide 113, and  $\text{H}_3\text{BO}_3$  (II) 200 g. The mixture was polymerized at  $50^\circ$  to a 90% reaction. The polymer obtained was mixed with 35% dioctyl phthalate and processed at  $175^\circ$  to a white fleece in the presence of 1% dibasic Pb stearate. Without adding II, the fleece was yellow to brownish.

IT 3555-47-3, Silicic acid, tetrakis(trimethylsilyl) ester  
(vinyl chloride polymerization in presence of, to prevent discoloration)

RN 3555-47-3 CAPLUS

CN Trisiloxane, 1,1,1,5,5,5-hexamethyl-3,3-bis[(trimethylsilyl)oxy] - (9CI)  
(CA INDEX NAME)



COOH

The diagram illustrates a chemical reaction. On the left, a linear polymer chain is shown with two silicon (Si) atoms connected by an oxygen (O) atom. Each silicon atom is bonded to two methyl groups (G<sub>1</sub>). An arrow points to the right, where a cross-linked network is shown. In this network, a central silicon atom is bonded to two methyl groups (G<sub>1</sub>) and two oxygen atoms. Each of these oxygen atoms is further bonded to a silicon atom, which is in turn bonded to two methyl groups (G<sub>1</sub>), forming a three-dimensional structure.

[illegible]

Page 1

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NEWS	5	AUG 30	CA/Capplus -Increased access to 19th century research documents
NEWS	6	AUG 30	CASREACT - Enhanced with displayable reaction conditions
NEWS	7	SEP 09	ACD predicted properties enhanced in REGISTRY/ZREGISTRY
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NEWS	9	OCT 04	CA/Capplus-Canadian Intellectual Property Office (CIPO) added to core patent offices
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NEWS	14	OCT 27	DIOGENES content streamlined
NEWS	15	OCT 27	EPPFULL enhanced with additional content
NEWS EXPRESS		JUNE 13	CURRENT WINDOWS VERSION IS V8.0, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 13 JUNE 2005
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=> s l1

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SCREENING COMPLETE - 5 REACTIONS TO VERIFY FROM 3 DOCUMENTS

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SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*

PROJECTED VERIFICATIONS: 5 TO 234  
PROJECTED ANSWERS: 1 TO 79

L2 1 SEA SSS SAM L1 ( 1 REACTIONS)

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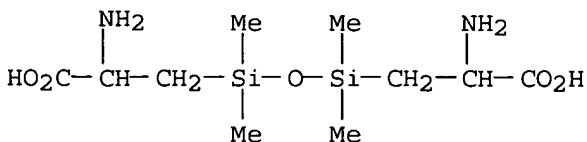
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SEARCH TIME: 00.00.03

L3 13 SEA SSS FUL L1 ( 39 REACTIONS)

=> d fh1t ibib abs tot

L3 ANSWER 1 OF 13 CASREACT COPYRIGHT 2005 ACS on STN

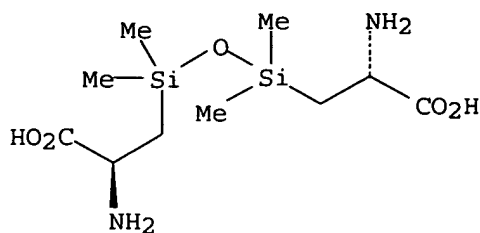
RX(1) OF 6 ...2 A ==> B + C



2 A

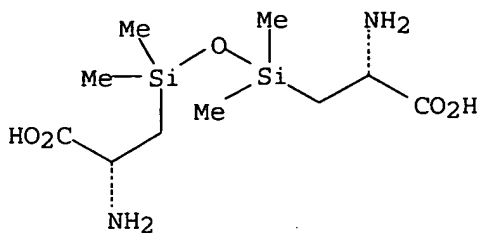






● 2 HCl

B



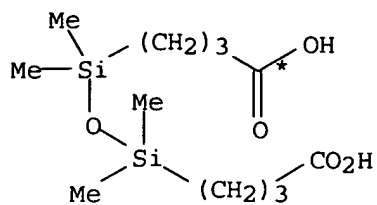
● 2 HCl

C

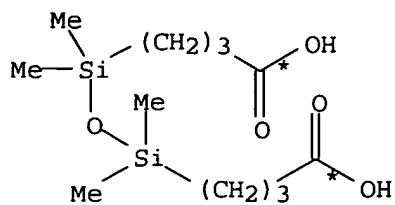
RX(1) RCT A **850755-39-4**  
 RGT D 7647-01-0 HCl  
 PRO B **850755-35-0**, C 850755-37-2  
 SOL 7732-18-5 Water  
 CON 5 minutes, 20 deg C  
 ACCESSION NUMBER: 142:430340 CASREACT  
 TITLE: The SiOH-Containing  $\alpha$ -Amino Acid  
 HOME2SiCH2CH(NH2)COOH and Its Immobilization on Silica  
 via an Si-O-Si Linkage  
 AUTHOR(S): Tacke, Reinhold; Schmid, Thomas; Merget, Markus  
 CORPORATE SOURCE: Institut fuer Anorganische Chemie, Universitaet  
 Wuerzburg, Wuerzburg, D-97074, Germany  
 SOURCE: Organometallics (2005), 24(7), 1780-1783  
 CODEN: ORGND7; ISSN: 0276-7333  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The  $\alpha$ -amino acid ester rac-PhMe2SiCH2CH(NH2)COOEt (rac-4) was transformed into the disiloxane RMe2SiOSiMe2R (5; R = CH2CH(NH2)COOH) via an Si-C(Ph) cleavage in boiling hydrochloric acid. Upon dissoln. of 5 in water, spontaneous formation of the racemic SiOH-containing  $\alpha$ -amino acid HOME2SiCH2CH(NH2)COOH (rac-6) occurred, which could be immobilized on silica via an Si-O-Si linkage between the  $\alpha$ -amino acid and the silica support (characterization by solid-state NMR spectroscopy). The resulting silica-immobilized  $\alpha$ -amino acid contains both characteristic functionalities: the COOH and the NH2 group.  
 REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 13 CASREACT COPYRIGHT 2005 ACS on STN

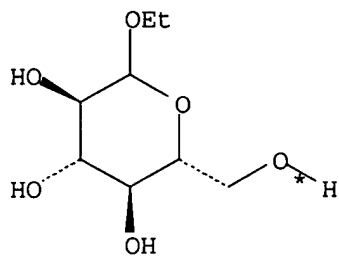
RX(1) OF 1 2 A + 3 B ==&gt; C + D



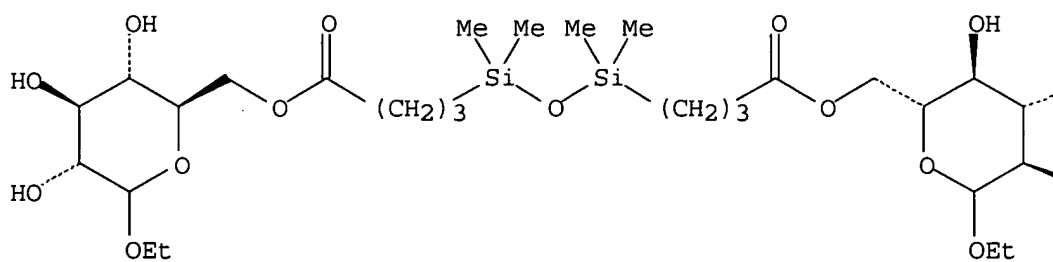
A



A



3 B

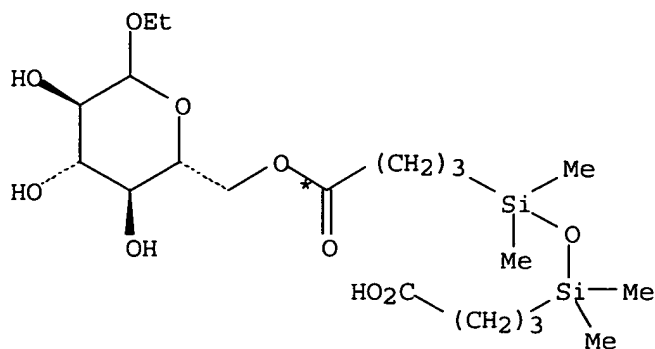


PAGE 1-A

PAGE 1-B



C  
YIELD 44%



D  
YIELD 19%

RX(1) RCT A 3353-68-2, B 34625-23-5  
 PRO C 662147-98-0, D 662147-99-1  
 CAT 9001-62-1 Lipase  
 CON 36 hours, 70 deg C  
 NTE biotransformation, enzymic, regioselective, Novozyme 435 used,  
 no solvent

ACCESSION NUMBER: 140:199513 CASREACT  
 TITLE: "Sweet silicon": Biocatalytic reactions to form  
 organo-silicon carbohydrate macro-mers  
 AUTHOR(S): Sahoo, Bishwabhusan; Brandstadt, Kurt F.; Lane, Thomas  
 H.; Gross, Richard A.  
 CORPORATE SOURCE: NSF IUCRC for Biocatalysis and Bioprocessing of  
 Macromolecules, Othmer Department of Chemical and  
 Biological Sciences and Engineering, Six Metrotech  
 Center, Polytechnic University, Brooklyn, NY, 11201,  
 USA  
 SOURCE: Polymer Preprints (American Chemical Society, Division  
 of Polymer Chemistry) (2003), 44(2), 617-618  
 CODEN: ACPPAY; ISSN: 0032-3934  
 PUBLISHER: American Chemical Society, Division of Polymer  
 Chemistry  
 DOCUMENT TYPE: Journal; (computer optical disk)  
 LANGUAGE: English

AB An enzyme-catalyzed regioselective reaction of an organo-silicon material  
 with a carbohydrate was reported under mild reaction conditions (i.e. low  
 temperature, neutral pH, solvent-less). In particular, pure silicone-sugar  
 conjugates were prepared in a one-step reaction, without  
 protection-deprotection steps. This simplification of an otherwise  
 tedious reaction was a result of the inherent regioselectivity of lipase.  
 The lipase-catalyzed reactions did not require activation of the acid  
 groups. In comparison to organic materials, the hydrophobic organo-silicons  
 were acceptable substrates and appeared to enhance the rate of  
 condensation catalyzed by the interfacial enzyme (i.e., lipase). Given  
 the ability to perform a selective reaction and maintain the integrity of  
 the siloxane bonds with lipase, the ability to synthesize structurally  
 defined organo-silicon carbohydrates with a diversified set of functional  
 groups may be used to create new materials such as fibers, films,  
 coatings, gels, and surfactants with novel properties (e.g. elec.  
 conductive).

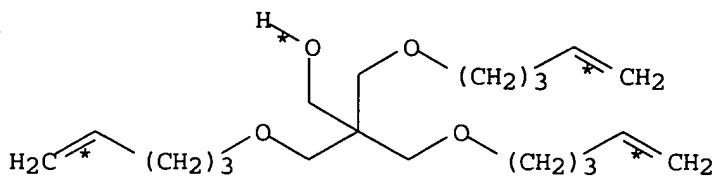
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RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 13 CASREACT COPYRIGHT 2005 ACS on STN

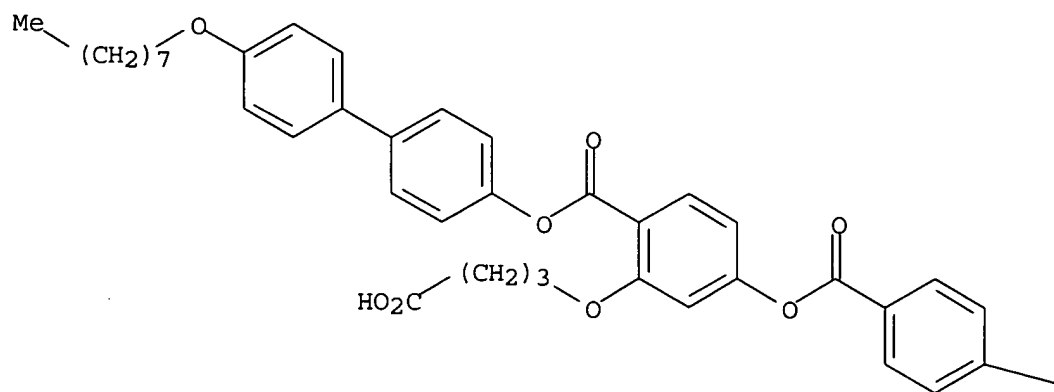
RX(24) OF 37 COMPOSED OF RX(7), RX(8)

RX(24) D + AB + 3 AG ==> AH

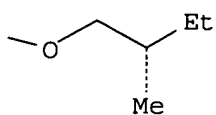


D

PAGE 1-A

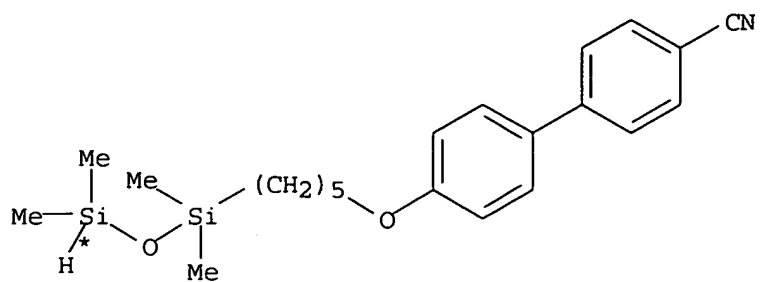


PAGE 1-B



AB

<11/14/2005>



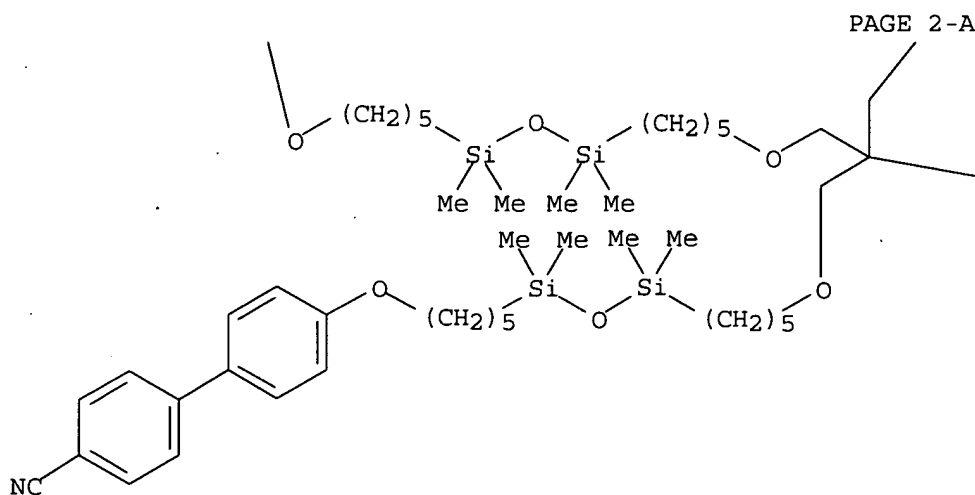
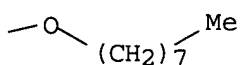
3 AG

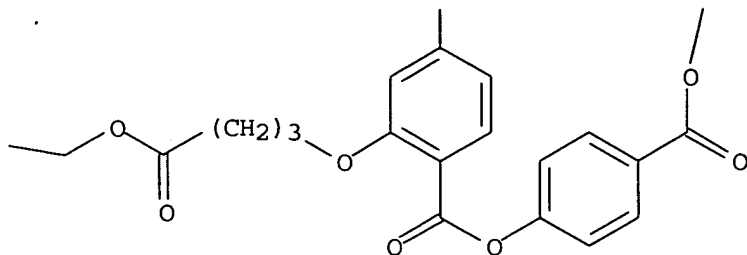
2  
STEPS  
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PAGE 1-C





AH  
YIELD 87%

RX(7) RCT D 649728-01-8, AB **649728-06-3**  
RGT J 538-75-0 DCC  
PRO AF 649728-07-4  
CAT 1122-58-3 4-DMAP  
SOL 75-09-2 CH2Cl2  
CON 3 days, room temperature

RX(8) RCT AF 649728-07-4

STAGE(1)

CAT 7440-06-4 Pt  
SOL 1330-20-7 Xylene, 108-88-3 PhMe  
CON 15 minutes, room temperature

STAGE(2)

RCT AG **367272-97-7**  
SOL 108-88-3 PhMe  
CON 18 hours, room temperature

PRO AH **649728-08-5**

NTE Karstedt's catalyst used

ACCESSION NUMBER: 140:145876 CASREACT

TITLE: Segregated liquid crystalline dendritic supermolecules  
- multipedes based on pentaerythritol scaffolds

AUTHOR(S): Saez, Isabel M.; Goodby, John W.

CORPORATE SOURCE: Liquid Crystals and Advanced Organic Materials Group,  
Department of Chemistry, University of Hull, Hull, HU6  
7RX, UK

SOURCE: Journal of Materials Chemistry (2003), 13(11),  
2727-2739

CODEN: JMACEP; ISSN: 0959-9428

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A group of chiral nematic multipedal materials based on pentaerythritol containing two types of mesogenic sub-units were synthesized. The presence of different types of mesogens, the topol. of the attachment to the core (end-on and side-on) and the chemical nature of the linking connection to the PE scaffold (ether, ester and tetramethyldisiloxane moieties) were used to tailor the mesomorphic properties. The related uniform tetramers have

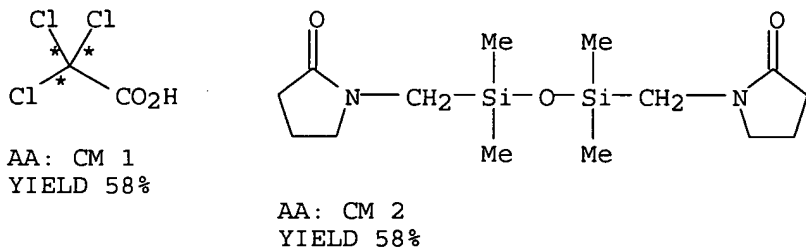
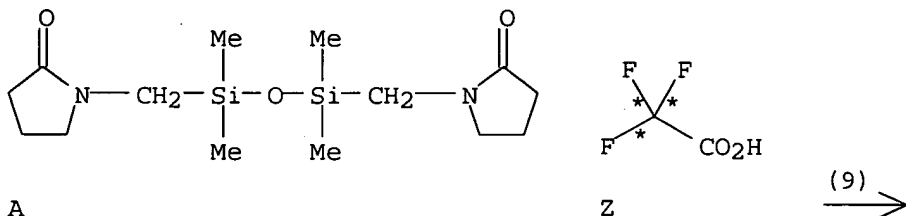
also been studied. The materials were characterized by a variety of techniques including  $^1\text{H}$ ,  $^{13}\text{C}$ ,  $^{29}\text{Si}$  NMR spectroscopy, SEC, MALDI-TOF MS, DSC and POM. The crystalline state was found to be suppressed for most of the materials once they had experienced a first isotropization process; all exhibited glass transitions near room temperature and accompanying wide temperature

range mesophases. The parent supramol. system carrying just terminally appended mesogens exhibited the smectic A phase, whereas the alternative parent material carrying only laterally attached chiral mesogens exhibited the chiral nematic phase.

REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 13 CASREACT COPYRIGHT 2005 ACS on STN

RX (9) OF 12            A + Z ==&gt; AA



RX (9)            RCT    A 82878-53-3, Z 76-05-1  
                     PRO    AA 329735-98-0  
                     SOL    71-43-2 Benzene

ACCESSION NUMBER:	134:237544 CASREACT
TITLE:	Reaction of lactams derived from 1,1,3,3-tetramethyl-1,3-disiloxanes with electrophilic reagents. Molecular and crystal structure of 1,1,3,3-tetramethyl-1,3-bis[N-(1-phenylethyl)-acetamidomethyl]-1,3-disiloxane and the adduct of 1,1,3,3-tetramethyl-1,3-bis(2-oxopyrrolidinomethyl)-1,3-disiloxane with trichloroacetic acid
AUTHOR(S):	Shipov, A. G.; Kramarova, E. P.; Artamkina, O. B.; Negrebetskii, Vad. V.; Kalashnikova, N. A.; Ovchinnikov, Yu. E.; Pogozhikh, S. A.; Baukov, Yu. I.
CORPORATE SOURCE:	Russian State Medical University, Moscow, Russia
SOURCE:	Russian Journal of General Chemistry (Translation of Zhurnal Obshchei Khimii) (2000), 70(6), 889-896

CODEN: RJGCEK; ISSN: 1070-3632

PUBLISHER: MAIK Nauka/Interperiodica Publishing

DOCUMENT TYPE: Journal

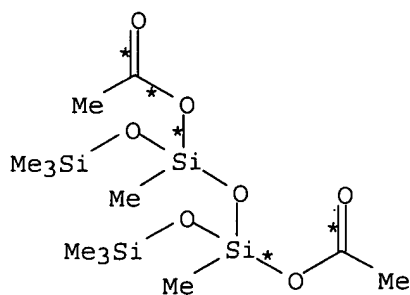
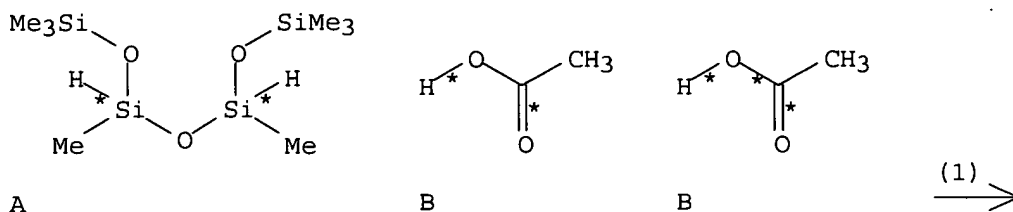
LANGUAGE: English

AB The effect was revealed of activation of the siloxane bond in lactams derived from 1,1,3,3-tetramethyl-1,3-disiloxanes containing a C(O)NCH<sub>2</sub>SiOSi fragment in reactions with electrophilic reagents, leading, in the general case, to facile Si-O bond cleavage and formation of five-coordinate silicon chelate rings incorporating the lactam oxygen atom which forms the coordination bond O→Si. The structure of 1,1,3,3-tetramethyl-1,3-bis[N-(1-phenylethyl)acetamidomethyl]-1,3-disiloxane and the adduct of 1,1,3,3-tetramethyl-1,3-bis(2-oxopyrrolidinomethyl)-1,3-disiloxane with trichloroacetic acid was studied by x-ray diffraction. For the first time in siloxanes with amidomethyl and related substituents at the silicon atom in the former compound there was found a weak coordination interaction O...Si (2.8 Å).

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 5 OF 13 CASREACT COPYRIGHT 2005 ACS on STN

RX(1) OF 5 A + 2 B ==> C



C  
YIELD 100%

RX(1) RCT A 16066-09-4, B 64-19-7  
PRO C 3555-57-5  
CAT 3375-31-3 Pd(OAc)<sub>2</sub>  
SOL 64-19-7 AcOH

ACCESSION NUMBER: 132:293814 CASREACT  
TITLE: An Efficient Pd-Catalyzed Route to Silyl Esters  
AUTHOR(S): Chauhan, Moni; Chauhan, Bhanu P. S.; Boudjouk, Philip



CORPORATE SOURCE: Center for Main Group Chemistry Department of  
Chemistry, North Dakota State University, Fargo, ND,  
58105, USA

SOURCE: Organic Letters (2000), 2(8), 1027-1029  
CODEN: ORLEF7; ISSN: 1523-7060

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

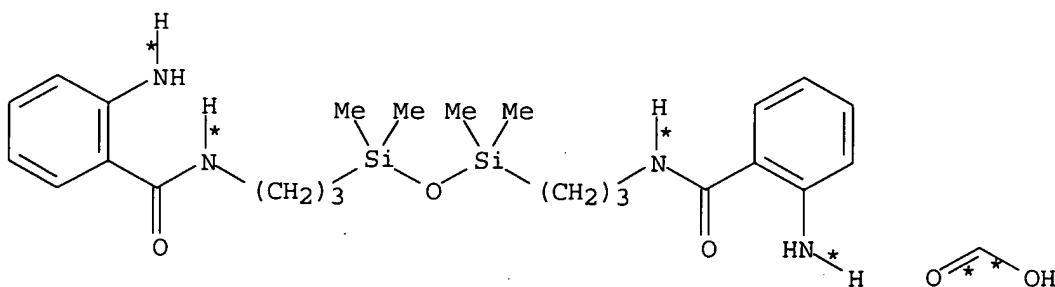
LANGUAGE: English

AB A 1-step, highly selective catalytic route to silyl esters is reported. Com. available silanes with Si-H functionality were converted to silyl or siloxy esters in the presence of Pd(OAc)<sub>2</sub> under mild reaction conditions. For example, 99% HCO<sub>2</sub>SiMe(OSiMe<sub>3</sub>)<sub>2</sub> was obtained at room temperature in 2 h from formic acid and MeSiH(OSiMe<sub>3</sub>)<sub>2</sub>. A non-carboxylic acid, MeSO<sub>3</sub>H, was also silylated with quant. yield if dried acid was used. This protocol is equally applicable for the modification of multiple Si centers in one framework and lead to the corresponding polysilyl esters, Me<sub>3</sub>SiO(SiMe(O<sub>2</sub>CR)O)<sub>n</sub>SiMe<sub>3</sub> (R = Me, Ph, CH<sub>2</sub>P(O)(OEt)<sub>2</sub>), in high yields. A comparison of catalytic efficiency of Pd(OAc)<sub>2</sub> vs. Pd on C was also undertaken.

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 6 OF 13 CASREACT COPYRIGHT 2005 ACS on STN

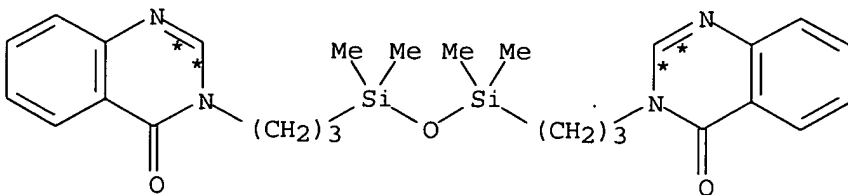
RX(12) OF 26 ...AL + 2 AN ==> AO...



AL

2 AN

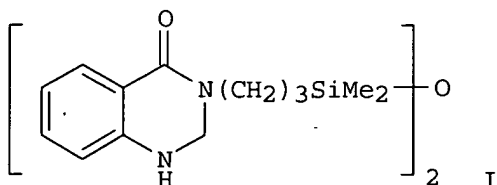
(12)  
→



AO  
YIELD 95%

<11/14/2005>

RX(12) RCT AL 171739-50-7, AN 64-18-6  
 PRO AO 171739-51-8  
 ACCESSION NUMBER: 124:29848 CASREACT  
 TITLE: Synthesis of novel C-organosilicon derivatives,  
 potential inhibitors of HIV reverse transcription  
 AUTHOR(S): Lafay, Jean; Latxague, Laurent; Lacroix, Christine;  
 Deleris, Gerard  
 CORPORATE SOURCE: Laboratoire de Chimie Bioorganique, Univ. de Bordeaux  
 2, Bordeaux, 33076, Fr.  
 SOURCE: Phosphorus, Sulfur and Silicon and the Related  
 Elements (1995), 102(1-4), 155-68  
 CODEN: PSSLEC; ISSN: 1042-6507  
 PUBLISHER: Gordon & Breach  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI

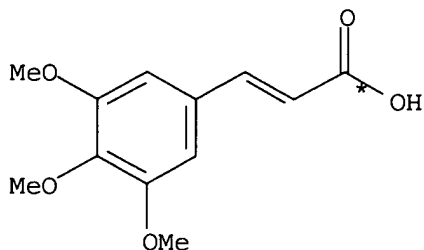


AB A series of silylated nucleobases, e.g. I, were prepared as potential therapeutic agents against HIV. These compds. were designed to interact with the active site of HIV Reverse Transcriptase (RT). Such mols. might therefore inhibit the reverse transcription process of the virus.

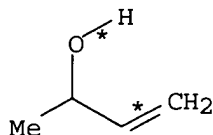
L3 ANSWER 7 OF 13 CASREACT COPYRIGHT 2005 ACS on STN

RX(3) OF 3 COMPOSED OF RX(1), RX(2)

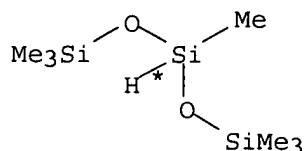
RX(3) A + B + G ==> H



A

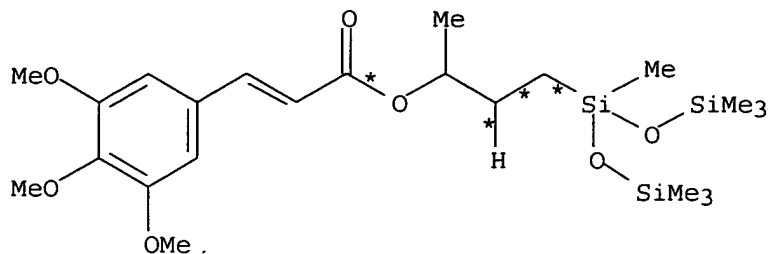


B



G

2  
STEPS  
→



H  
YIELD 81%

RX(1) RCT A 90-50-6

STAGE(1)

RGT D 7719-09-7 SOCl<sub>2</sub>  
SOL 71-43-2 Benzene

STAGE(2)

RCT B 598-32-3  
SOL 108-88-3 PhMe

PRO C 127427-02-5

RX(2) RCT C 127427-02-5, G 1873-88-7

PRO H 127426-94-2

CAT 81032-58-8 Platinum, bis[1,3-bis(η<sup>2</sup>-ethenyl)-1,1,3,3-tetramethyldisiloxane]-

SOL 108-88-3 PhMe

ACCESSION NUMBER: 121:134459 CASREACT

TITLE: Silicone type cinnamic acid derivative, preparation method thereof, UV-ray absorber, and external skin treatment agent

INVENTOR(S): Yoshida, Masashi; Umishio, Kenichi; Uehara, Keiichi; Nanba, Tomiyuki

PATENT ASSIGNEE(S): Shiseido Co., Ltd., Japan

SOURCE: U.S., 18 pp. Cont.-in-part of U.S. 5,093,511.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

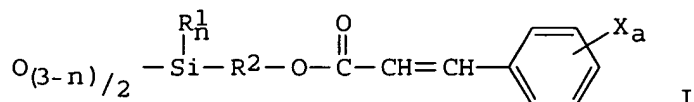
FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5315022	A	19940524	US 1991-676127	19910327
JP 02117613	A2	19900502	JP 1989-174800	19890706
JP 2860305	B2	19990224		
JP 02167291	A2	19900627	JP 1989-174799	19890706

JP 2855209	B2	19990210		
US 5093511	A	19920303	US 1989-376321	19890706
JP 03287591	A2	19911218	JP 1990-86440	19900331
PRIORITY APPLN. INFO.:			JP 1988-168838	19880708
			JP 1988-181500	19880722
			US 1989-376321	19890706
			JP 1990-86440	19900331

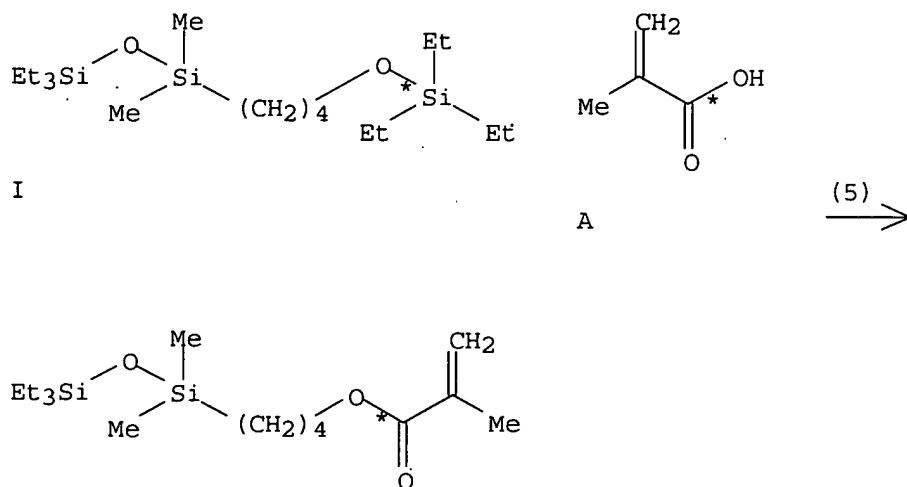
GI



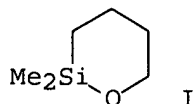
AB The preparation of a silicone type cinnamic acid derivative which is a siloxane having at least one unit represented by the formula I: and having the other units which may exist in the siloxane being represented by the formula:  $\text{O}(4-m)/2\text{SiR}_m3$  ( $\text{R}_1 = \text{C1-4 alkyl, Ph, Me}_3\text{SiO}$ ;  $\text{R}_2 = \text{divalent hydrocarbon group having at least two carbon atoms, which may include a heteroatom, O, X is an alkoxy group, } n = 0-3; \text{R}_3 = \text{C1-4 alkyl, Ph, Me}_3\text{SiO}$ ;  $m = 0-3$ ), useful as UV-ray absorber and external skin treatment agent, is described. Thus, esterification of 3,4,5-trimethoxycinnamic acid with 1-butene-3-ol gave 74.6% ester which on  $\text{Pt}\{[(\text{CH}_2\text{:CH})\text{SiMe}_2]_{20}\}_2$  (preparation given) catalyzed hydrosilylation with 1,1,1,3,5,5,5-heptamethylsiloxane in xylene solvent gave 85.3% 3,4,5-(MeO) $_3\text{C}_6\text{H}_2\text{CH:CHCO}_2\text{CHMeCH}_2\text{CH}_2\text{Si}(\text{OSiMe}_3)_2\text{Me}$ . The UV-ray absorbing and external skin treatment property of some of the compds. prepared is described.

L3 ANSWER 8 OF 13 CASREACT COPYRIGHT 2005 ACS on STN

RX(5) OF 15 ...I + A ==> D

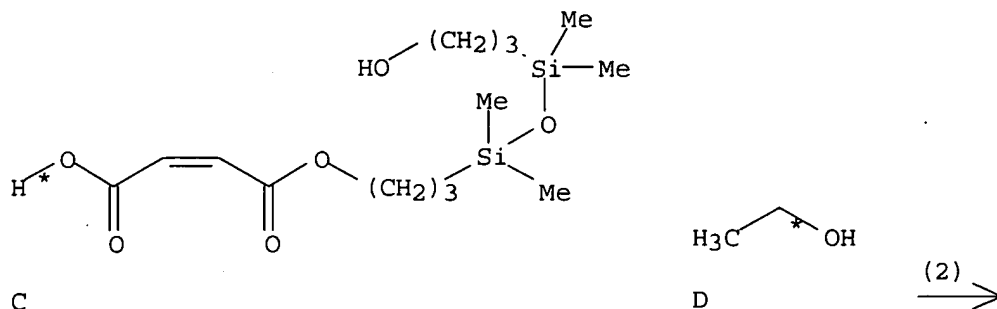


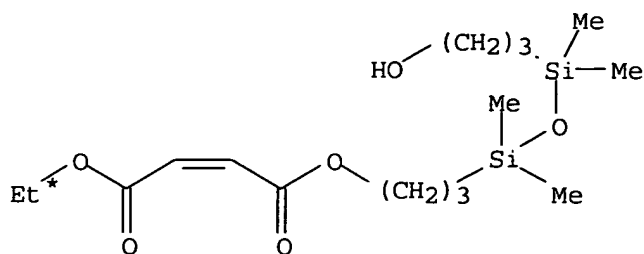
D



AB Treating title siloxacyclohexane I with CH<sub>2</sub>:CMeCO<sub>2</sub>H and Et<sub>3</sub>SiOH in the presence of H<sub>2</sub>SO<sub>4</sub> gave 53% CH<sub>2</sub>:CMeCO<sub>2</sub>(CH<sub>2</sub>)<sub>4</sub>SiMe<sub>2</sub>OSiEt<sub>3</sub> (II). I reacted with Et<sub>3</sub>SiOH and H<sub>2</sub>SO<sub>4</sub> to give 18% Et<sub>3</sub>SiOSiMe<sub>2</sub>(CH<sub>2</sub>)<sub>4</sub>OH and 40% Et<sub>3</sub>SiOSiMe<sub>2</sub>(CH<sub>2</sub>)<sub>4</sub>OSiEt<sub>3</sub> (III). III reacted with CH<sub>2</sub>:CMeCOX (X = Cl, OH) to give II as major product.

RX(2) OF 20 . . . **C** + D ==> **E** . . .





E

RX(2) RCT C 88351-30-8, D 64-17-5

PRO E 105149-68-6

NTE catalyst is sulfonated coal

ACCESSION NUMBER: 105:208993 CASREACT

TITLE: Synthesis and physico-chemical properties of organosilicon maleates

AUTHOR(S): Gol'din, G. S.; Averbakh, K. O.; Muzychenko, T. A.; Leitan, O. V.; Chalbysheva, N. V.; Lavygin, I. A.

CORPORATE SOURCE: USSR

SOURCE: Zhurnal Prikladnoi Khimii (Sankt-Peterburg, Russian Federation) (1985), 58(11), 2516-21  
CODEN: ZPKHAB; ISSN: 0044-4618

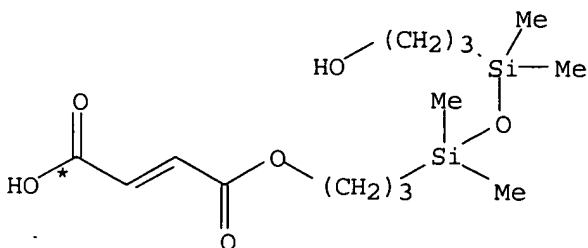
DOCUMENT TYPE: Journal

LANGUAGE: Russian

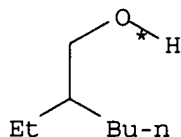
AB HO(CH<sub>2</sub>)<sub>3</sub>SiMe<sub>2</sub>OSiMe<sub>2</sub>(CH<sub>2</sub>)<sub>3</sub>O<sub>2</sub>CCH:CHCO<sub>2</sub>R (I, R = H) and O[SiMe<sub>2</sub>(CH<sub>2</sub>)<sub>3</sub>O<sub>2</sub>CCH:CHCO<sub>2</sub>R]<sub>2</sub> (II, R = H) were prepared by reaction of [HO(CH<sub>2</sub>)<sub>3</sub>SiMe<sub>2</sub>]<sub>2</sub>O with maleic anhydride 1:1 and 1:2 resp. Esterification of I and II (R = H) with R<sub>1</sub>OH [R<sub>1</sub> = Et, Me<sub>2</sub>CHCH<sub>2</sub>, Me(CH<sub>2</sub>)<sub>3</sub>(Et)CHCH<sub>2</sub>] gave 72-90% I and II (R = R<sub>1</sub>). Reaction of II (R = H) with octamethylcyclotetrasiloxane in the presence of ion exchange resin KY 23 gave HO<sub>2</sub>CCH:CHCO<sub>2</sub>(CH<sub>2</sub>)<sub>3</sub>SiMe<sub>2</sub>O(Me<sub>2</sub>SiO)<sub>m</sub>SiMe<sub>2</sub>(CH<sub>2</sub>)<sub>3</sub>O<sub>2</sub>CCH:CHCO<sub>2</sub>H (m = 4, 8). Some physicochem. properties (viscosity, etc.) of the prepared I and II were determined

L3 ANSWER 10 OF 13 CASREACT COPYRIGHT 2005 ACS on STN

RX(2) OF 11 ...C + D ==&gt; E

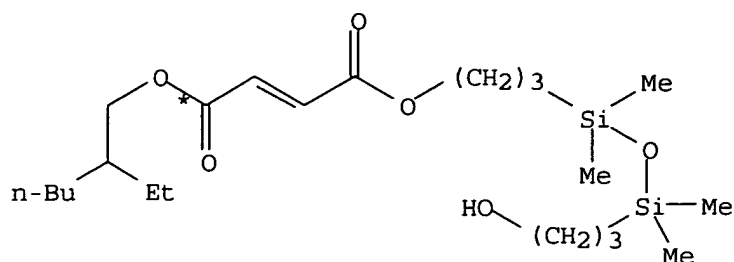


C



D

(2) →



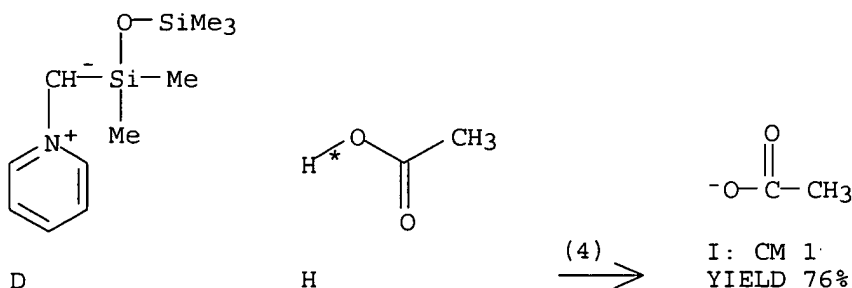
E  
YIELD 90%

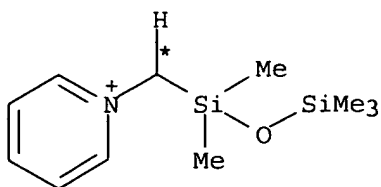
RX(2) RCT C 344901-27-5, D 104-76-7  
PRO E 344908-74-3

ACCESSION NUMBER: 100:34600 CASREACT  
TITLE: Sulfo derivatives of organosilicon maleates  
AUTHOR(S): Gol'din, G. S.; Averbakh, K. O.; Muzychenko, T. A.;  
Buyakova, T. E.; Fedotov, N. S.  
CORPORATE SOURCE: USSR  
SOURCE: Zhurnal Obshchei Khimii (1983), 53(8), 1834-7  
CODEN: ZOKHA4; ISSN: 0044-460X  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
AB Carbofunctional silylorg. maleates e.g.  $O[SiMe_2(CH_2)_3O_2CCH:CHCO_2H]_2$  (I) and their sulfo derivs., e.g.,  $O[SiMe_2(CH_2)_3O_2CCH(SO_3Na)CH_2CO_2Na]_2$  (II) were prepared. Thus, treating  $[HO(CH_2)_3Me_2Si]_{20}$  with maleic anhydride (1:2) gave 83% I which on treatment with  $NaHSO_3$  gave 86.7% II.

L3 ANSWER 11 OF 13 CASREACT COPYRIGHT 2005 ACS on STN

RX(4) OF 13 D + H ==> I





I: CM 2  
YIELD 76%

RX(4) RCT D 82629-59-2, H 64-19-7

PRO I 82629-62-7

ACCESSION NUMBER: 97:72414 CASREACT

TITLE: Organosilicon methylides of pyridinium. I. Synthesis of derivatives of thiazolidines and nitrones with an organosilicon radical in the side chain

AUTHOR(S): Svetkin, Yu. V.; Kolesnik, Yu. R.

CORPORATE SOURCE: Dnepropetr. Khim.-Tekhnol. Inst., Dnepropetrovsk, USSR

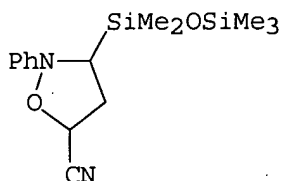
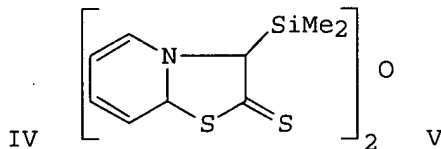
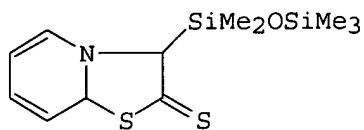
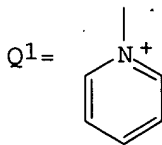
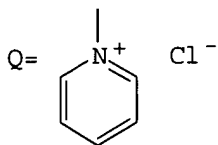
SOURCE: Zhurnal Obshchei Khimii (1982), 52(4), 907-12

CODEN: ZOKHA4; ISSN: 0044-460X

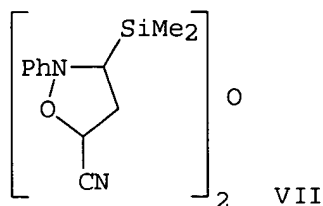
DOCUMENT TYPE: Journal

LANGUAGE: Russian

GI



VI



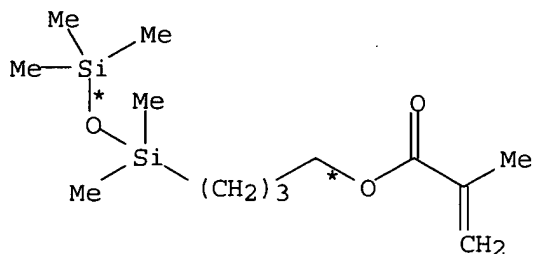
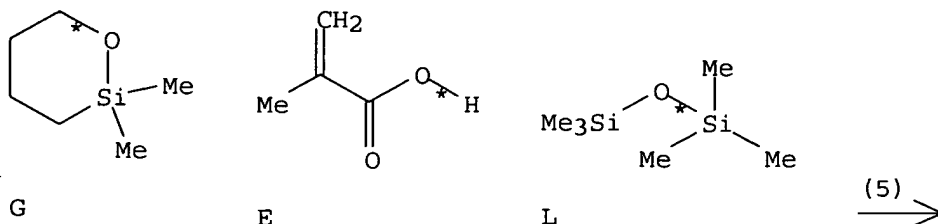
AB Alkylation of pyridine with  $RCH_2SiMe_2OSiMe_2CH_2Cl$  ( $R = H, Cl$ ) gave  $RCH_2SiMe_2OSiMe_2CH_2Q$  (I,  $R = H, Q$ ) which on dehydrochlorination gave  $Q_1C-HSiMe_2OSiMe_3$  (II) and  $(Q_1C-HSiMe_2)_2O$  (III). Treating II and III with  $BzCl$  gave  $BzQCHSiMe_2OSiMe_3$  and  $(BzQCHSiMe_2)_2O$  resp. Cyclization of I with  $CS_2$  gave IV and V resp. Treating II and III with  $PhNO$  gave nitrones



PhN(O):CHSiMe<sub>2</sub>OSiMe<sub>3</sub> and [PhN(O):CHSiMe<sub>2</sub>]<sub>2</sub>O resp. II and III with CH<sub>2</sub>:CHCN gave VI and VII resp.

L3 ANSWER 12 OF 13 CASREACT COPYRIGHT 2005 ACS on STN

RX(5) OF 7 G + E + L ==> K



RX(5) RCT G 5833-47-6, E 79-41-4, L 107-46-0

RGT J 7664-93-9 H<sub>2</sub>SO<sub>4</sub>

PRO K 74813-42-6

CAT 123-31-9 Hydroquinone

ACCESSION NUMBER: 93:132548 CASREACT

TITLE: Synthesis of acryloxybutyl- and methacryloxybutylpentamethyldisiloxanes

AUTHOR(S): Andrianov, K. A.; Volkova, L. M.; Zhdanov, A. A.; Persegova, E. P.

CORPORATE SOURCE: Inst. Elementoorg. Soedin., Moscow, USSR

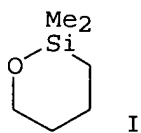
SOURCE: Zhurnal Obshchei Khimii (1980), 50(5), 1088-90

CODEN: ZOKHA4; ISSN: 0044-460X

DOCUMENT TYPE: Journal

LANGUAGE: Russian

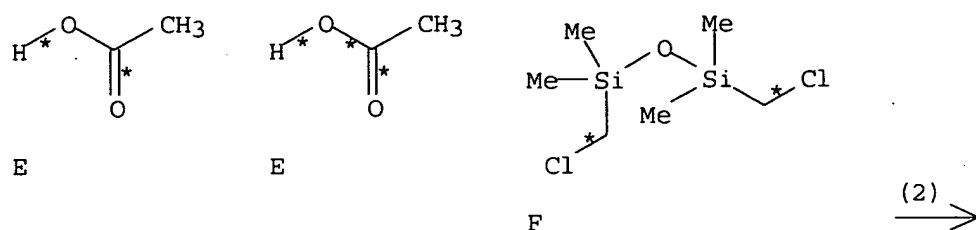
GI



AB Reaction of I with  $\text{CH}_2:\text{CRCO}_2\text{H}$  ( $\text{R} = \text{H}, \text{Me}$ ) in the presence of  $\text{Me}_3\text{SiCl}$  and  $\text{H}_2\text{SO}_4$  gave  $\text{Me}_3\text{SiOSiMe}_2(\text{CH}_2)_4\text{O}_2\text{CCR}:\text{CH}_2$  (II) and  $[\text{CH}_2:\text{CRCO}_2(\text{CH}_2)_4\text{SiMe}_2]_2\text{O}$  (III). Heating I with  $\text{CH}_2:\text{CRCO}_2\text{H}$  in the presence of  $(\text{Me}_3\text{Si})_2\text{O}$  and  $\text{H}_2\text{SO}_4$  or III with  $(\text{Me}_3\text{Si})_2\text{O}$  and  $\text{H}_2\text{SO}_4$  gave II.

L3 ANSWER 13 OF 13 CASREACT COPYRIGHT 2005 ACS on STN

RX(2) OF 3 2 E + F ==> G



G  
YIELD 93%

RX(2) RCT E 64-19-7, F 2362-10-9

PRO G 5360-04-3

SOL 1330-20-7 Xylene

NTE Classification: Acetoxylation; Substitution; # Conditions: AcOH  
Net3 xylene; Rf 18h

ACCESSION NUMBER: 56:73279 CASREACT

TITLE: Reaction of alkyl halides with carboxylic acids and phenols in the presence of tertiary amines

AUTHOR(S): Merker, Robert L.; Scott, Mary Jane

CORPORATE SOURCE: Mellon Inst., Pittsburgh, PA

SOURCE: Journal of Organic Chemistry (1961), 26, 5180-2  
CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB Preparation of a number of esters of aliphatic and aromatic carboxylic acids and

of mixed aromatic-aliphatic ethers was carried out through the reaction of tertiary amine salts of carboxylic acids or phenolic compds. with alkyl halides. In addition to other advantageous factors, the rather large solubility

of the amine carboxylates in a variety of organic solvents led to a wide

possible choice of solvent systems and reaction temps. which were not always obtainable when using conventional esterification methods. PhCH<sub>2</sub>Cl (50 g.), 48.1 g. BzOH, and 39.8 g. NEt<sub>3</sub> refluxed with 100 cc. xylene, the mixture washed, dried, and distilled gave 65.8 g. benzyl benzoate, n<sub>25</sub>D 1.5668. Hexyl chloride (50 g.), 50.6 g. BzOH, 42 g. NEt<sub>3</sub>, and 105 cc. xylene refluxed 11 hrs. gave 47.2 g. hexyl benzoate, b<sub>50</sub> 166°, n<sub>25</sub>D 1.4902, d<sub>25</sub> 0.971. PhCH<sub>2</sub>Cl (50 g.), 47.3 g. AcOH, and 39.8 g. NEt<sub>3</sub> refluxed 2 hrs., poured into hexane, the NEt<sub>3</sub>.HCl removed, and the filtrate distilled gave 44.4 g. benzyl acetate, b<sub>102</sub> 134°, d<sub>25</sub> 1.050, n<sub>25</sub>D 1.4994. AcOH (36 g.), 55 g. NEt<sub>3</sub>, and 58 g. bis(chloromethyl)tetramethyldisiloxane (I) in 60 cc. xylene refluxed 18 hrs. and the product distilled gave 93% tetramethyldisiloxane-1,3-bis(methyl acetate), b. 171°, d<sub>25</sub> 1.00, n<sub>25</sub>D 1.4215. Xylene (110 g.), 3 g. hydroquinone, and 51 g. methacrylic acid refluxed 8 hrs. with 55.5 g. NEt<sub>3</sub> and 57.8 g. I gave 37 g. tetramethyldisiloxane-1,3-bis(methyl methacrylate), b<sub>3</sub> 127°, n<sub>25</sub>D 1.4472, d<sub>25</sub> 0.996. I (97 g.), 43 g. HCO<sub>2</sub>H, 90 g. NEt<sub>3</sub>, and 150 g. xylene refluxed 12 hrs. gave 84% tetramethyldisiloxane-1,3-bis(methyl formate), b<sub>40</sub> 143°, n<sub>25</sub>D 1.4228, d<sub>25</sub> 1.034. Cyclohexyl bromide (50 g.), 36.9 g. AcOH, and 31 g. NEt<sub>3</sub> refluxed 4 hrs. gave 65.5% cyclohexene, b<sub>740</sub> 82°, n<sub>25</sub>D 1.4435. A small amount of cyclohexyl acetate was also obtained. Me<sub>3</sub>CCl (50 g.), 64.8 g. AcOH, and 54.6 g. NEt<sub>3</sub> refluxed several hrs. gave no 2-methylpropene or any evidence of reaction. PhBr (50 g.), 38.2 g. AcOH, and 32.1 g. NEt<sub>3</sub> refluxed 3.5 hrs. without reaction occurring. PhCH<sub>2</sub>Cl (50 g.), 74.3 g. PhOH, and 40 g. NEt<sub>3</sub> refluxed 2 hrs. gave 33.6 g. benzyl phenyl ether in 46% yield, m. 38-9° (95% alc.). NEt<sub>3</sub> (101 g.), 60 g. AcOH, 76.5 g. allyl chloride, 300 cc. Me<sub>2</sub>CO, and 1 g. KI kept 1 week at room temperature gave 89.9 g. NEt<sub>3</sub>.HCl; the filtrate distilled gave 35.8% allyl acetate, b. 99-100°, n<sub>25</sub>D 1.4018. Allyltriethylammonium chloride was easily obtained from an Me<sub>2</sub>CO solution containing NEt<sub>3</sub> and allyl chloride plus a trace of KI; 4 g. of the salt in 12 g. AcOH, 10.1 g. NEt<sub>3</sub>, and 30 cc. Me<sub>2</sub>CO left 75 hrs. at room temperature, filtered, and the 2.6 g. solids analyzed showed 94% NEt<sub>3</sub>.HCl. No allyl acetate could be found in the filtrate.

=> d hist

(FILE 'HOME' ENTERED AT 10:48:22 ON 14 NOV 2005)

FILE 'REGISTRY' ENTERED AT 10:48:30 ON 14 NOV 2005

L1 STRUCTURE UPLOADED

FILE 'CASREACT' ENTERED AT 10:48:57 ON 14 NOV 2005

L2 1 S L1

L3 13 S L1 SSS FULL

=> s l3 and anhydride

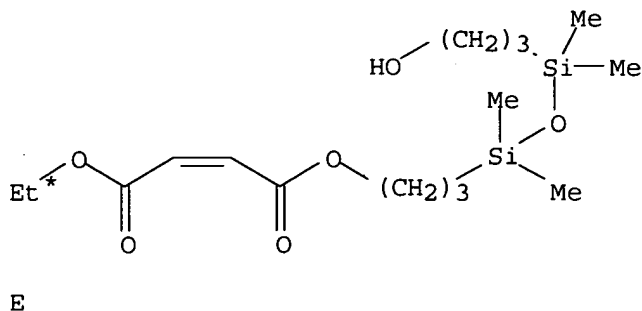
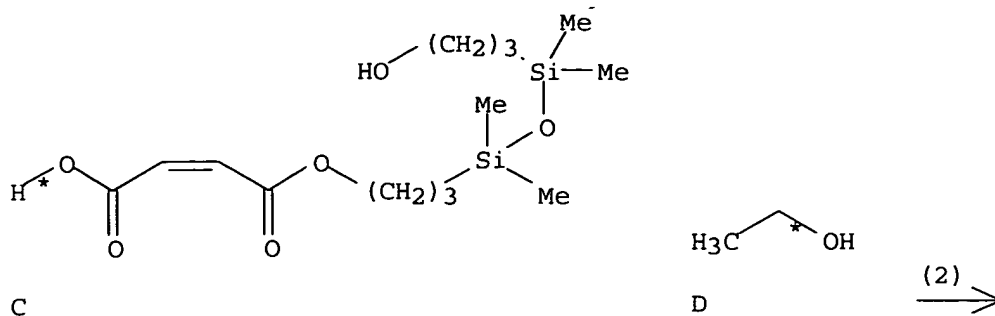
L4 2 L3 AND ANHYDRIDE

=> d fhit ibib abs tot

L4 ANSWER 1 OF 2 CASREACT COPYRIGHT 2005 ACS on STN

RX(2) OF 20 ...C + D ==> E...

<11/14/2005>



RX(2) RCT C 88351-30-8, D 64-17-5

PRO E 105149-68-6

NTE catalyst is sulfonated coal

ACCESSION NUMBER: 105:208993 CASREACT

TITLE: Synthesis and physico-chemical properties of organosilicon maleates

AUTHOR(S): Gol'din, G. S.; Averbakh, K. O.; Muzychenko, T. A.; Leitan, O. V.; Chalbysheva, N. V.; Lavygin, I. A.

CORPORATE SOURCE: USSR

SOURCE: Zhurnal Prikladnoi Khimii (Sankt-Peterburg, Russian Federation) (1985), 58(11), 2516-21

CODEN: ZPKHAB; ISSN: 0044-4618

DOCUMENT TYPE: Journal

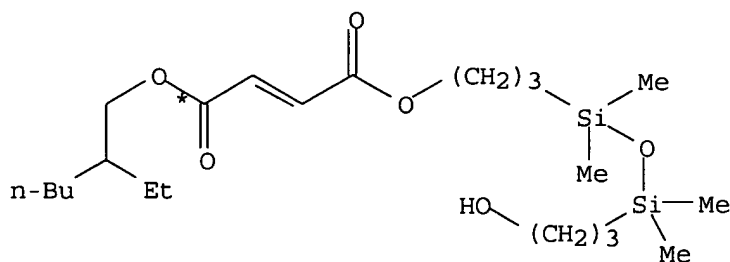
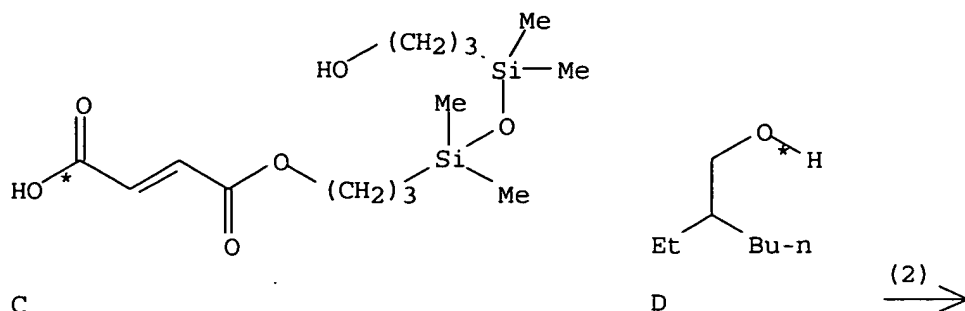
LANGUAGE: Russian

AB HO(CH<sub>2</sub>)<sub>3</sub>SiMe<sub>2</sub>OSiMe<sub>2</sub>(CH<sub>2</sub>)<sub>3</sub>O<sub>2</sub>CCH:CHCO<sub>2</sub>R (I, R = H) and O[SiMe<sub>2</sub>(CH<sub>2</sub>)<sub>3</sub>O<sub>2</sub>CCH:CNCOC<sub>2</sub>R]<sub>2</sub> (II, R = H) were prepared by reaction of [HO(CH<sub>2</sub>)<sub>3</sub>SiMe<sub>2</sub>]<sub>2</sub>O with maleic anhydride 1:1 and 1:2 resp. Esterification of I and II (R = H) with R<sub>1</sub>OH [R<sub>1</sub> = Et, Me<sub>2</sub>CHCH<sub>2</sub>, Me(CH<sub>2</sub>)<sub>3</sub>(Et)CHCH<sub>2</sub>] gave 72-90% I and II (R = R<sub>1</sub>). Reaction of II (R = H) with octamethylcyclotetrasiloxane in the presence of ion exchange resin KY 23 gave HO<sub>2</sub>CCH:CHCO<sub>2</sub>(CH<sub>2</sub>)<sub>3</sub>SiMe<sub>2</sub>O(Me<sub>2</sub>SiO)<sub>m</sub>SiMe<sub>2</sub>(CH<sub>2</sub>)<sub>3</sub>O<sub>2</sub>CCH:CHCO<sub>2</sub>H (m = 4, 8). Some physicochem. properties (viscosity, etc.) of the prepared I and II were determined

L4 ANSWER 2 OF 2 CASREACT COPYRIGHT 2005 ACS on STN

RX(2) OF 11 ...C + D ==> E

<11/14/2005>



E  
YIELD 90%

RX(2) RCT C 344901-27-5, D 104-76-7  
PRO E 344908-74-3

ACCESSION NUMBER: 100:34600 CASREACT  
TITLE: Sulfo derivatives of organosilicon maleates  
AUTHOR(S): Gol'din, G. S.; Averbakh, K. O.; Muzychenko, T. A.;  
Buyakova, T. E.; Fedotov, N. S.  
CORPORATE SOURCE: USSR  
SOURCE: Zhurnal Obshchei Khimii (1983), 53(8), 1834-7  
CODEN: ZOKHA4; ISSN: 0044-460X  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
AB Carbofunctional silylorg. maleates e.g.  $O[SiMe_2(CH_2)_3O_2CCH:CHCO_2H]_2$  (I) and their sulfo derivs., e.g.,  $O[SiMe_2(CH_2)_3O_2CCH(SO_3Na)CH_2CO_2Na]_2$  (II) were prepared. Thus, treating  $[HO(CH_2)_3Me_2Si]_{20}$  with maleic anhydride (1:2) gave 83% I which on treatment with  $NaHSO_3$  gave 86.7% II.

=> log y

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
178.77	179.41

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-10.20	-10.20

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STN INTERNATIONAL LOGOFF AT 10:51:17 ON 14 NOV 2005

<11/14/2005>